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Rio Blanco Oil Shale Company

MODULAR DEVELOPMENT PHASE MONITORING REPORT SEVEN

VOLUME 3 of 4

December 1979–November 1980 Year End Report

Gulf Oil Corporation / Standard Oil Company (Indiana)
A General Partnership
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RIO BLANCO OIL SHALE COMPANY
MODULAR DEVELOPMENT PHASE
MONITORING REPORT 7

December 1979 - November 1980
YEAR-END REPORT

Prepared by:
RIO BLANCO OIL SHALE COMPANY
DENVER, COLORADO

March 31, 1981

APPENDICES

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Vegetation Data

APPENDIX 3-1.1

Phytosociological Studies Data for 1980
Upland Sagebrush Vegetation Type

Scientific names associated with species abbreviations are presented on the following list. Growth form (GR FRM) designations are: shrubs (S), trees (T), grasses (G), forbs (F), lichens (L), mosses (M), duff/litter (D), bare soil (B) and rock (R). Parameter abbreviations are density (D) and cover (C).

Sample plot (PLT) format for shrub and tree density was 5 x 6 meters and the numbers listed for each plot are actual count data. Cover values for shrubs and trees within each plot represent the number of meters intercepted by the canopy of respective species along a 5 meter portion of the 100 meter transect. The numbers should be interpreted as having one decimal place, so that 19 on the printout corresponds to 1.9 meters coverage along the 5 meter segment of the transect. Grass and forb coverage values for each plot are estimates made within 1 x 1 m microplots and are percent data. The last column on the printouts (cover) represents a sum of the cover and/or density values. For tree and shrub cover data, this sum should be interpreted as having one decimal place.

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS

Abbreviation	Generic Name
ACH LAN	*Achillea lanulosa*
AGO GLA	*Agoseris glauca*
AGR CRI	*Agropyron cristatum*
AGR DAS	*Agropyron dasystachyum*
AGR RIP	*Agropyron riparium*
AGR SMI	*Agropyron smithii*
AGR SPP	*Agropyron* species
AGR TRI	*Agropyron trichophorum*
AME ALN	*Amelanchier alnifolia*
AME UTA	*Amelanchier utahensis*
AND SPP	*Androsace* species
ANT PUL	*Antennaria pulcherrima*
ANT SPP	*Antennaria* species
ARA SPP	*Arabis* species
ARE FEN	*Arenaria fendleri*
ART CAN	*Artemisia cana*
ART FRI	*Artemisia frigida*
ART LUD	*Artemisia ludoviciana*
ART TRI	*Artemisia tridentata*
AST CIC	*Astragalus cicer*
AST CHA	*Astragalus chamaeleuce*
AST CON	*Astragalus convallatius*
AST DIV	*Astragalus diversifolius*
AST SPP	*Aster* species or *Astragalus* species
ATR BON	*Atriplex bonnevillensis*
ATR CAN	*Atriplex canescens*
ATR GAR	*Atriplex gardneri*
BAL SAG	*Balsamorhiza sagittata*
BOR SPP	Boraginaceae species
BRO INE	*Bromus inermis*

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS
(Continued)

Abbreviation	Generic Name
BRO TEC	Bromus tectorum
BRO SPP	Bromus species
CAM MON	Camphorosma monospeliaca
CAR GEY	Carex geyeri
CAR SPP	Carex species
CAS SPP	Castilleja species
CER MON	Cercocarpus montanus
CER LAN	Ceratoides lanata
CHA DOU	Chaenactis douglasii
CHE ALB	Chenopodium album
CHE SPP	Chenopodium species
CHR LEV	Chrysanthemum leucantheum
CHR NAU	Chrysothamnus nauseosus
CHR SPP	Chrysothamnus species
CHR VIS	Chrysothamnus visidiflorus
CLE SER	Cleome serrulata
COL PAR	Collinsia pariflora
COM UMB	Comandra umbellata
CRE SPP	Crepis species
CRU SPP	Cruciferae species
CRY SER	Cryptantha sericea
CRY SPP	Cryptantha species
DES RIC	Descurainia richardsonii
ELY CIN	Elymus cinereus
ERI EAT	Erigeron eatonii
ERI DEN	Eriogonum densum
ERI LON	Eriogonum lonchophyllum
ERI SPP	Eriogonum species
ERI UMB	Eriogonum umbellatum
EUR LAN	Eurotia lanata (see Ceratoides lanata)
GRA SPP	Grass species
GUT SAR	Gutierrezia sarothrae
HAL GLO	Halogeton glomeratus

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS

Abbreviation	Generic Name
ACH LAN	Achillea lanulosa
AGO GLA	Agoseris glauca
AGR CRI	Agropyron cristatum
AGR DAS	Agropyron dasystachyum
AGR RIP	Agropyron riparium
AGR SMI	Agropyron smithii
AGR SPP	Agropyron species
AGR TRI	Agropyron trichophorum
AME ALN	Amelanchier alnifolia
AME UTA	Amelanchier utahensis
AND SPP	Androsace species
ANT PUL	Antennaria pulcherrima
ANT SPP	Antennaria species
ARA SPP	Arabis species
ARE FEN	Arenaria fendleri
ART CAN	Artemisia cana
ART FRI	Artemisia frigida
ART LUD	Artemisia ludoviciana
ART TRI	Artemisia tridentata
AST CIC	Astragalus cicer
AST CHA	Astragalus chamaeleuce
AST CON	Astragalus convallatius
AST DIV	Astragalus diversifolius
AST SPP	Aster species or Astragalus species
ATR BON	Atriplex bonnevillensis
ATR CAN	Atriplex canescens
ATR GAR	Atriplex gardneri
BAL SAG	Balsamorhiza sagittata
BOR SPP	Boraginaceae species
BRO INE	Bromus inermis

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS

(Continued)

Abbreviation	Generic Name
BRO TEC	Bromus tectorum
BRO SPP	Bromus species
CAM MON	Camphorosma monospeliaca
CAR GEY	Carex geyeri
CAR SPP	Carex species
CAS SPP	Castilleja species
CER MON	Cercocarpus montanus
CER LAN	Ceratoides lanata
CHA DOU	Chaenactis douglasii
CHE ALB	Chenopodium album
CHE SPP	Chenopodium species
CHR LEV	Chrysanthemum leucantheum
CHR NAU	Chrysothamnus nauseosus
CHR SPP	Chrysothamnus species
CHR VIS	Chrysothamnus visidiflorus
CLE SER	Cleome serrulata
COL PAR	Collinsia pariflora
COM UMB	Comandra umbellata
CRE SPP	Crepis species
CRU SPP	Cruciferae species
CRY SER	Cryptantha sericea
CRY SPP	Cryptantha species
DES RIC	Descurainia richardsonii
ELY CIN	Elymus cinereus
ERI EAT	Erigeron eatonii
ERI DEN	Eriogonum densum
ERI LON	Eriogonum lonchophyllum
ERI SPP	Eriogonum species
ERI UMB	Eriogonum umbellatum
EUR LAN	Eurotia lanata (see Ceratoides lanata)
GRA SPP	Grass species
GUT SAR	Gutierrezia sarothrae
HAL GLO	Halogeton glomeratus

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS
(Continued)

Abbreviation	Generic Name
HAP ACA	Haplopappus acaulis
HAP NUT	Haplopappus nuttallii
HED BOR	Hedysarum boreale
HEN UTA	Hedysarum utahensis
HET VIL	Heterotheca villosa
HEV PAR	Heuchera parvilflora
HOR VUL	Hordeum vulgare
HYM ACA	Hymenoxys acaulis
IPO AGG	Ipomopsis aggregata
IPO SPP	Ipomopsis species
JUN OST	Juniperus osteosperma
KOC PRO	Kochia prostrata
KOE GRA	Koeleria gracilis
KOE CRI	Koeleria cristata (see Koeleria gracilis)
LEG SPP	Legume species
LIN LEW	Linum lewisii
LIT RUD	Lithospernum ruderale
LOM JUN	Lomatium juniperinum
LUP ARG	Lupinus argenteus
LUP SPP	Lupinus species
MAC PAT	See Senecio spp.
MAH REP	Mahonia repens
MEL OFF	Melilotus officinalis
ORY HYM	Oryzopsis hymenoides
OPU SPP	Opuntia species
PAC MYR	Pachistima myrsinites
PEN CAE	Penstemon caespitosus
PEN OST	Penstemon osterhoutii
PEN STR	Penstemon strictus
PHL HOO	Phlox hoodii
PHL LON	Phlox longifolia
PHL MUS	Phlox multiflora

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS
(Continued)

Abbreviation	Generic Name
PHL PRA	Phleum pratense
PHL SPP	Phlox species
PHY FLO	Physaria floribunda
PIN EDU	Pinus edulis
POA FEN	Poa fendleriana
POA SPP	Poa species
PUR TRI	Purshia tridentata
RHU TRI	Rhus trilobata
SAL KAL	Salsola kali
SEN MUL	Senecio multilobatus
SEN SPP	Senecio species
SIS ALT	Sisymbrium altissimum
SIS LIN	Sisymbrium linifolium
SIT HYS	Sitanion hystrix
SPH COC	Sphaeralcea coccinea
STI CAM	Stipa comata
STI SPP	Stipa species
STI VIR	Stipa viridula
SYM ORE	Symphoricarpos oreophilus
TAR OFF	Taraxacum officinale
THE ELE	Thelypodium elegans
TRA SPP	Tragopogon species
TRI GYM	Trifolium gymnocarpon
UNK FOR	Unknown forb
UNK COM	Unknown composite
UNK CRU	Unknown crucifer
UNK GRA	Unknown grass
UNK SHR	Unknown shrub
UNK SPP	Unknown species

GENERIC NAMES CORRESPONDING TO SPECIES ABBREVIATIONS

(Continued)

Abbreviation	Additional Information
DAT MIS	Data Missing
LIC HEN	Lichen Species
LIT TER	Litter
MOS SPP	Moss Species
SOI BAR	Bare Soil

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PARAM	PLT 1	PLT 2	PLT 3	PLT 4	PLT 5	PLT 6	PLT 7	PLT 8	PLT 9	PLT 10	PLT 11	PLT 12	PLT 13	PLT 14	PLT 15	PLT 16	PLT 17	PLT 18	PLT 19	PLT 20	COVER
1	SB	5	A	60580	ART TRI	S	C	4	.	6	6	6	.	.	1	19	2	6	12	.	13	6	6	2	3	2	19	113
2	SB	5	A	60580	ART TRI	S	D	24	14	19	16	23	18	26	29	17	17	16	9	16	18	21	30	14	29	24	16	396
3	SB	5	A	60580	CHR NAU	S	C	.	1	.	.	1	1	.	.	2	.	.	.	3	5	4	4	7	3	4	4	37
4	SB	5	A	60580	CHR NAU	S	D	17	8	3	3	7	7	12	11	10	12	13	7	9	26	17	19	37	43	18	19	298
5	SB	5	A	60580	SYM ORE	S	C	.	2	.	2	.	.	.	.	16	.	3	28	16	2	.	.	.	.	.	1	70
6	SB	5	A	60580	SYM ORE	S	D	.	1	1	1	.	4	.	6	9	5	5	12	9	4	4	6	.	2	2	1	72
7	SB	5	A	60580	TET CAN	S	C	.	4	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	7
8	SB	5	A	60580	TET CAN	S	D	.	6	.	.	3	18	.	.	.	.	.	.	10	.	.	.	4	.	.	.	41
9	SB	5	A	60580	AME UTA	S	C	.	.	.	1	.	.	.	.	4	1	.	19	11	.	.	.	.	1	.	.	57
10	SB	5	A	60580	AME UTA	S	D	.	1	.	2	3	1	4	3	4	6	4	10	5	.	.	4	1	4	2	1	55
11	SB	5	A	60580	PUR TRI	S	D	.	3	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
12	SB	5	A	60580	PIN EDU	T	D	.	.	1	.	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	3
13	SB	5	A	60580	JUN OST	T	D	.	.	.	.	.	.	.	.	1	1	1	2	1	.	1	1	.	.	.	.	8
14	SB	5	A	61580	POA SPP	G	C	15	.	.	10	15	10	15	20	15	5	1	.	.	.	.	.	5	.	.	.	111
15	SB	5	A	61580	PHL HOO	F	C	20	5	5	2	5	3	3	3	.	10	5	2	.	.	1	.	4	.	3	2	73
16	SB	5	A	61580	SPH COC	F	C	1	2	.	.	2	1	.	15	.	.	2	.	.	1	.	.	3	.	.	.	27
17	SB	5	A	61580	AST PUR	F	C	1	1	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	4
18	SB	5	A	61580	PHL LON	F	C	.	.	6	.	2	3	.	.	.	.	1	2	.	.	.	.	1	.	1	4	22
19	SB	5	A	61580	AST BOR	F	C	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
20	SB	5	A	61580	ERI EAT	F	C	1	.	.	.	.	.	2	.	.	.	.	.	.	2	.	.	.	.	.	.	5
21	SB	5	A	61580	CRY SER	F	C	1	.	.	.	3	.	.	.	.	3	.	.	.	.	.	2	.	.	.	.	9
22	SB	5	A	61580	BRO TEC	G	C	1	.	.	.	.	.	.	.	2	.	.	.	.	2	.	30	5	.	.	.	40
23	SB	5	A	61580	ORY HYM	G	C	.	5	3	.	.	.	.	.	.	.	1	.	.	10	.	3	.	.	5	2	29
24	SB	5	A	61580	TAR OFF	F	C	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	2
25	SB	5	A	61580	CRE OCC	F	C	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
26	SB	5	A	61580	SEN MUL	F	C	.	.	1	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6
27	SB	5	A	61580	HED BOR	F	C	.	.	3	13	10	15	.	.	.	15	12	3	.	.	.	.	.	45	.	.	116
28	SB	5	A	61580	POA SPP	G	C	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	8
29	SB	5	A	61580	AST DIV	F	C	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
30	SB	5	A	61580	UNK GRA	G	C	.	.	.	5	.	5	10	10	.	5	.	10	5	5	10	10	.	10	8	.	93
31	SB	5	A	61580	IOW INC	F	C	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
32	SB	5	A	61580	ERI EAT	F	C	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
33	SB	5	A	61580	STI COM	G	C	.	.	.	.	2	.	.	.	.	5	.	.	.	5	.	.	.	.	.	5	17
34	SB	5	A	61580	PEN CAE	F	C	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
35	SB	5	A	61580	PHY FLU	F	C	.	.	.	.	.	1	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2
36	SB	5	A	61580	SIS LIN	F	C	.	.	.	.	.	2	.	2	.	.	.	.	.	.	.	2	.	.	.	.	6

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

OBS	VEG_TYPE	LOCATION	TRANSEL	DATE	SPECIES	GR_FRM	PAR	PL1	PL2	PL3	PL4	PL5	PL6	PL7	PL8	PL9	PL10	PL11	PL12	PL13	PL14	PL15	PL16	PL17	PL18	PL19	PL20	COVER
37	SB	S	A	61580	TRI GYM	F	C	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	3
38	SB	S	A	61580	LUP ARG	F	C	.	.	.	.	.	.	.	.	8	.	.	10	.	1	.	.	3	5	.	.	27
39	SB	S	A	61580		M	C	.	.	.	.	.	.	.	20	.	.	.	.	.	.	.	.	.	.	.	.	20
40	SB	S	A	61580		R	C	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10
41	SB	S	A	61580		D	C	10	10	5	15	20	15	80	10	25	40	5	20	30	30	2	10	20	25	30	25	427
42	SB	S	A	61580		B	C	30	70	85	45	50	30	15	40	30	20	80	60	50	40	95	30	60	35	60	50	975
43	SB	S	A	61580	UNK GRA	G	C	.	.	.	.	.	.	.	.	2	.	.	.	.	5	.	2	.	.	.	.	9
44	SB	S	A	61580	PEN SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	2
45	SB	S	A	61580	SIT HYS	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	2
46	SB	S	B	60680	ART TRI	S	C	.	16	9	11	22	14	27	3	3	1	44	16	18	5	6	1	12	12	6	6	232
47	SB	S	B	60680	ART TRI	S	D	17	36	25	27	19	17	18	11	13	12	21	28	23	11	12	14	22	15	9	24	374
48	SB	S	B	60680	CHR NAU	S	C	.	2	4	1	5	.	.	.	5	2	1	3	2	3	.	.	4	1	.	.	33
49	SB	S	B	60680	CHR NAU	S	D	16	17	17	24	21	18	14	21	18	21	22	22	35	9	17	21	23	13	9	14	372
50	SB	S	B	60680	SYM ORE	S	C	.	.	.	.	3	.	.	7	3	.	.	.	.	.	.	.	.	.	1	1	15
51	SB	S	B	60680	SYM ORE	S	D	3	.	.	.	2	1	4	8	11	2	4	.	1	2	6	4	1	6	3	7	65
52	SB	S	B	60680	AME UTA	S	C	.	.	.	.	.	.	.	13	8	.	.	.	.	.	.	3	.	7	.	4	35
53	SB	S	B	60680	AME UTA	S	D	3	1	2	2	3	4	2	2	4	1	2	4	1	1	3	4	3	8	6	5	61
54	SB	S	B	60680	TET CAN	S	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
55	SB	S	B	60680	TET CAN	S	D	.	.	1	.	.	.	.	.	.	2	1	.	.	.	.	.	2	1	14	.	21
56	SB	S	B	60680	JUN OST	T	D	.	.	.	.	.	.	.	.	.	1	1	.	.	.	1	.	.	.	.	.	3
57	SB	S	B	61680	POA SPP	G	C	10	5	10	15	5	10	5	5	8	4	15	3	2	8	1	1	2	8	.	5	122
58	SB	S	B	61680	CRY SER	F	C	1	.	.	2	8	1	12	2	2	.	.	.	2	4	.	.	1	.	4	8	47
59	SB	S	B	61680	AGR SPP	G	C	5	10	8	5	1	10	2	5	3	5	4	.	.	3	.	5	.	.	.	2	68
60	SB	S	B	61680	PHL HOO	F	C	.	8	1	3	12	1	4	6	.	10	8	3	5	1	4	20	3	10	.	5	104
61	SB	S	B	61680	PHL LON	F	C	3	.	1	.	1	1	1	1	1	1	2	1	1	.	3	3	.	1	.	.	21
62	SB	S	B	61680	DEL NEL	F	C	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	2
63	SB	S	B	61680	ERI EAT	F	C	4	3	.	3	1	.	.	.	1	4	2	.	1	3	.	6	.	3	.	.	31
64	SB	S	B	61680	AST PUR	F	C	2	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	4
65	SB	S	B	61680	TRI GYM	F	C	1	.	2	.	2	.	1	.	2	.	2	.	.	2	.	2	3	2	.	1	20
66	SB	S	B	61680	UNK COM	F	C	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
67	SB	S	B	61680	SPH COC	F	C	.	1	.	.	.	4	.	.	.	.	.	.	.	.	2	5	.	.	.	.	12
68	SB	S	B	61680	CRE ACU	F	C	.	.	.	2	.	.	3	.	2	3	.	.	.	.	1	.	.	4	.	.	15
69	SB	S	B	61680	KOE GRA	G	C	.	.	.	5	.	4	.	.	.	.	3	.	1	.	.	.	.	.	.	.	13
70	SB	S	B	61680	PEN CAE	F	C	.	.	.	2	.	.	.	.	.	1	.	.	.	.	.	1	.	.	.	.	4
71	SB	S	B	61680	TOW INC	F	C	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
72	SB	S	B	61680	SIS LIN	F	C	.	.	.	.	2	.	.	.	.	.	.	3	.	.	.	.	2	.	.	.	7

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PAR AM	PLT 1	PLT 2	PLT 3	PLT 4	PLT 5	PLT 6	PLT 7	PLT 8	PLT 9	PLT 10	PLT 11	PLT 12	PLT 13	PLT 14	PLT 15	PLT 16	PLT 17	PLT 18	PLT 19	PLT 20	COVER
73	SB	5	B	61680	ORY HYM	G	C	.	.	.	.	.	5	.	5	5	3	.	2	2	.	2	8	10	5	.	5	52
74	SB	5	B	61680	HED BOR	F	C	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	6	.	8
75	SB	5	B	61680	LOM SPP	F	C	.	.	.	.	.	.	1	.	.	1	.	.	.	1	.	.	.	.	.	.	3
76	SB	5	B	61680	AST DIV	F	C	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	1	.	.	.	.	4
77	SB	5	B	61680	PHY FLO	F	C	.	.	.	.	.	.	1	1	.	1	.	1	.	.	.	1	.	.	.	.	5
78	SB	5	B	61680	CAS SPP	F	C	.	.	.	.	.	.	.	2	3	.	.	.	.	.	.	.	.	.	.	.	5
79	SB	5	B	61680	CUM UMB	F	C	.	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	.	3
80	SB	5	B	61680	SEN MUL	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
81	SB	5	B	61680	TAR OFF	F	C	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
82	SB	5	B	61680	PEN SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.	3	.	.	6
83	SB	5	B	61680	LIT SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	3
84	SB	5	B	61680	ARA SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	3
85	SB	5	B	61680		R	C	.	.	.	.	.	20	.	.	20	.	.	.	.	.	.	.	.	.	.	.	40
86	SB	5	B	61680		D	C	50	10	25	10	90	25	80	10	40	10	40	80	45	35	20	5	15	30	15	25	660
87	SB	5	B	61680		B	C	35	80	55	45	10	20	15	50	15	80	25	10	20	30	75	55	40	25	75	20	780
88	SB	5	C	60980	ART TRI	S	C	8	7	7	2	5	7	8	1	8	2	7	5	16	2	2	13	11	12	9	2	134
89	SB	5	C	60980	ART TRI	S	D	22	19	13	21	21	15	26	21	13	20	19	18	29	27	31	20	32	26	28	24	445
90	SB	5	C	60980	CHR NAU	S	C	9	7	4	7	1	.	7	11	.	3	5	.	1	6	12	6	4	12	6	6	107
91	SB	5	C	60980	CHR NAU	S	D	35	22	15	24	25	14	20	13	15	19	25	23	12	16	22	22	29	18	19	17	405
92	SB	5	C	60980	SYM ORE	S	C	2	.	.	.	.	.	.	.	8	.	.	4	.	.	.	.	.	3	4	.	21
93	SB	5	C	60980	SYM ORE	S	D	2	1	.	.	.	.	2	1	2	1	.	1	2	2	1	3	3	4	10	2	37
94	SB	5	C	60980	AME UTA	S	C	5	.	2	1	.	7	.	1	.	.	.	.	.	4	4	3	.	.	1	.	28
95	SB	5	C	60980	AME UTA	S	D	3	2	3	1	1	4	6	6	1	3	5	6	4	5	4	5	4	.	2	1	66
96	SB	5	C	60980	JUN OST	T	C	.	.	.	.	.	5	2	.	.	.	.	.	.	.	.	.	.	.	.	.	7
97	SB	5	C	60980	JUN OST	T	D	.	.	.	.	1	.	1	.	.	1	.	.	.	.	.	1	.	1	.	1	6
98	SB	5	C	60980	TET CAN	S	D	.	4	14	.	.	.	.	.	.	5	.	1	.	.	.	3	.	1	.	.	28
99	SB	5	C	61680	POA SPP	G	C	5	7	12	8	3	.	10	3	5	20	3	.	10	2	15	.	15	5	5	20	148
100	SB	5	C	61680	PHL HOO	F	C	.	4	2	.	.	.	.	.	.	.	3	5	10	5	3	2	3	.	10	1	48
101	SB	5	C	61680	PHL LON	F	C	3	.	1	2	4	3	1	2	1	2	.	.	2	1	2	4	.	.	2	1	31
102	SB	5	C	61680	ERI EAT	F	C	2	.	2	.	.	.	2	2	.	2	.	.	1	.	3	4	.	.	.	2	20
103	SB	5	C	61680	AGR SPP	G	C	.	2	1	4	.	.	1	3	.	.	2	5	.	.	5	1	5	.	.	.	29
104	SB	5	C	61680	SPH COC	F	C	2	.	.	2	1	1	1	.	1	.	.	.	.	2	.	.	.	.	.	2	12
105	SB	5	C	61680	ZIG VEN	F	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
106	SB	5	C	61680	ORY HYM	G	C	12	.	5	.	3	.	.	4	3	.	2	4	5	10	.	.	.	.	.	.	48
107	SB	5	C	61680	TRI GYM	F	C	2	.	2	1	1	1	1	1	1	3	1	.	1	1	.	.	1	.	.	2	19
108	SB	5	C	61680	SIS LIN	F	C	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PARAM	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
109	SB	S	C	61680	TAR OFF	F	C	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
110	SB	S	C	61680	HED BOR	F	C	.	.	5	5	5	.	.	5	.	.	.	4	.	.	.	.	.	20	.	.	44
111	SB	S	C	61680	SEN MUL	F	C	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	2
112	SB	S	C	61680	STI COM	G	C	.	.	.	5	2	.	5	.	.	4	.	.	.	8	.	.	2	.	5	8	39
113	SB	S	C	61680	CRE OCC	F	C	.	.	.	2	.	.	.	.	.	.	5	.	1	.	.	3	.	2	.	.	13
114	SB	S	C	61680	DEL NEL	F	C	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
115	SB	S	C	61680	AGO GLA	F	C	.	.	.	2	.	.	.	1	.	1	.	2	.	2	.	.	.	.	.	.	8
116	SB	S	C	61680	PHY FLO	F	C	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	2
117	SB	S	C	61680	LUP ARG	F	C	.	.	.	.	.	20	.	.	.	1	4	10	.	.	.	.	.	10	.	.	45
118	SB	S	C	61680	OPU SPP	F	C	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	4
119	SB	S	C	61680	TOW INC	F	C	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	2
120	SB	S	C	61680	AST PUR	F	C	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
121	SB	S	C	61680	CRY SER	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	4	.	.	.	5
122	SB	S	C	61680	LOM SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
123	SB	S	C	61680	KOE GRA	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
124	SB	S	C	61680	SIS LIN	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
125	SB	S	C	61680		R	C	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	10
126	SB	S	C	61680		B	C	45	50	25	45	50	70	40	55	65	10	25	25	20	25	20	65	20	45	50	30	780
127	SB	S	C	61680		D	C	10	10	15	20	8	.	25	20	10	30	20	30	45	40	35	25	35	10	25	25	438
128	SB	S	D	61080	ART TRI	S	C	3	11	13	1	11	23	17	25	6	17	12	5	8	14	18	29	22	16	27	24	302
129	SB	S	D	61080	ART TRI	S	D	21	15	17	28	16	31	32	30	29	28	24	36	21	32	39	48	35	24	29	34	569
130	SB	S	D	61080	CHR NAU	S	C	2	2	1	2	2	5	1	.	1	2	3	1	2	1	.	2	2	1	2	2	34
131	SB	S	D	61080	CHR NAU	S	D	23	16	13	20	17	9	18	16	18	17	13	13	8	11	16	16	16	26	15	18	319
132	SB	S	D	61080	SYM ORE	S	C	1	.	3	.	1	1	.	.	.	.	.	.	5	1	.	.	.	.	.	.	12
133	SB	S	D	61080	SYM ORE	S	D	3	2	4	6	3	3	3	2	1	5	1	6	5	4	1	.	.	2	.	.	51
134	SB	S	D	61080	AME UTA	S	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
135	SB	S	D	61080	AME UTA	S	D	2	1	.	3	4	1	2	1	.	2	5	3	.	3	2	2	1	.	1	1	34
136	SB	S	D	61080	JUN OST	J	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
137	SB	S	D	61080	JUN OST	J	D	.	1	.	.	1	.	.	.	.	.	.	.	2	2	.	.	.	1	.	.	7
138	SB	S	D	61080	TET CAN	S	D	.	4	.	.	.	2	.	.	.	.	.	.	2	.	.	1	.	1	.	.	10
139	SB	S	D	61080	PUR TRI	S	D	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
140	SB	S	D	61680	POA SPP	G	C	.	.	10	10	10	.	10	2	.	2	.	10	20	25	15	6	10	2	5	10	147
141	SB	S	D	61680	PHL HOO	F	C	.	.	.	5	3	.	5	5	3	2	.	3	10	2	8	.	4	2	7	3	62
142	SB	S	D	61680	PHL LON	F	C	.	.	.	.	1	2	1	.	.	1	1	.	2	2	2	.	.	1	2	2	17
143	SB	S	D	61680	AST PUR	F	C	1	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	2
144	SB	S	D	61680	BRO TEC	G	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PARAM	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
145	SB	5	D	61680	ORY HYM	G	C	10	8	.	3	.	.	4	2	5	2	.	3	.	.	.	.	.	.	3	.	40
146	SB	5	D	61680	TRI GYM	F	C	1	.	.	.	.	.	.	.	.	.	.	1	1	.	.	1	.	1	.	.	5
147	SB	5	D	61680	ERI EAT	F	C	2	.	1	2	.	.	.	.	2	.	.	.	2	2	5	.	.	.	5	3	24
148	SB	5	D	61680	UNK GRA	G	C	.	5	4	.	.	4	.	.	.	.	.	.	.	.	.	5	.	.	10	.	28
149	SB	5	D	61680	PHY FLO	F	C	.	2	2	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	5
150	SB	5	D	61680	AGR SPP	G	C	.	.	3	8	4	2	2	6	5	2	2	5	10	5	3	1	2	3	.	5	68
151	SB	5	D	61680	CRE OCC	F	C	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
152	SB	5	D	61680	CRY SER	F	C	.	.	.	.	2	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	3
153	SB	5	D	61680	SEN MUL	F	C	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
154	SB	5	D	61680	PEN SPP	F	C	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
155	SB	5	D	61680	PEN CAE	F	C	.	.	.	.	.	.	2	2	.	.	.	.	.	.	.	.	.	.	.	.	4
156	SB	5	D	61680	SPH COC	F	C	.	.	.	.	.	.	.	7	.	.	.	.	.	.	.	.	.	.	.	3	10
157	SB	5	D	61680	STI COM	G	C	.	.	.	.	.	.	.	.	10	.	.	.	.	.	.	.	.	.	.	.	10
158	SB	5	D	61680	SIS LIN	F	C	.	.	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	2
159	SB	5	D	61680	AGO GLA	F	C	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	2
160	SB	5	D	61680	CAS SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1
161	SB	5	D	61680	LUM SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
162	SB	5	D	61680	KOE GRA	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
163	SB	5	D	61680		R	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.	.	5
164	SB	5	D	61680		M	C	.	.	.	.	5	.	.	5	.	.	.	.	10	.	.	10	.	.	10	.	40
165	SB	5	D	61680		B	C	75	35	20	45	20	60	55	40	30	15	80	25	35	35	15	25	20	35	15	40	720
166	SB	5	D	61680		D	C	.	10	45	15	40	15	15	25	25	60	10	35	20	20	40	45	25	25	45	10	525
167	SB	5	E	60980	ART TRI	S	C	11	13	15	9	12	21	5	12	22	18	7	9	3	16	24	14	7	.	6	7	231
168	SB	5	E	60980	ART TRI	S	D	15	8	19	22	22	20	17	34	17	21	16	16	20	21	21	16	12	13	24	19	373
169	SB	5	E	60980	AME UTA	S	C	2	18	.	.	2	1	.	.	.	1	.	.	.	.	.	.	.	1	26	.	51
170	SB	5	E	60980	AME UTA	S	D	9	4	5	4	1	4	.	3	4	7	4	2	2	4	4	1	1	1	3	5	68
171	SB	5	E	60980	PIN EDU	T	C	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
172	SB	5	E	60980	PIN EDU	T	D	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
173	SB	5	E	60980	SYM ORE	S	C	.	.	1	2	.	.	9	1	.	.	3	3	1	1	6	.	.	13	24	.	64
174	SB	5	E	60980	SYM ORE	S	D	.	4	5	7	9	5	4	4	3	4	5	2	4	2	6	4	7	6	4	8	93
175	SB	5	E	60980	CHR NAU	S	C	.	.	1	.	.	1	.	.	.	.	8	.	.	.	.	.	.	1	.	.	11
176	SB	5	E	60980	CHR NAU	S	D	9	7	23	5	3	6	12	9	.	5	13	1	.	2	8	4	15	21	11	8	162
177	SB	5	E	60980	JUN OST	T	C	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
178	SB	5	E	60980	JUN OST	T	D	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
179	SB	5	E	60980	TET CAN	S	D	.	.	.	.	.	.	.	.	1	.	.	.	1	3	7	2	7	7	.	.	28
180	SB	5	E	61580	PHL HOO	F	C	4	2	10	15	6	.	12	5	4	5	2	.	.	3	12	.	15	.	.	.	95

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OBS	VEG_TYPE	LOCALITY	TRANSECT	DATE	SPECIES	GR_FRM	PAR	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
181	SB	5	E	61580	PHL LON	F	C	.	2	.	.	.	1	.	1	.	.	1	.	1	.	.	1	5	.	.	.	12
182	SB	5	E	61580	PEN CAE	F	C	.	.	.	1	5	4	2	.	.	.	.	1	.	2	.	.	3	.	.	.	18
183	SB	5	E	61580	PHY FLO	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
184	SB	5	E	61580	SIS LIN	F	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	2
185	SB	5	E	61580	CRE OCC	F	C	.	1	.	.	.	2	.	.	.	.	1	.	.	.	.	.	4	.	.	.	8
186	SB	5	E	61580	UNK COM	F	C	3	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
187	SB	5	E	61580	HED BOR	F	C	1	.	.	.	.	.	.	.	12	.	.	.	.	.	.	.	.	.	.	8	21
188	SB	5	E	61580	AST PUR	F	C	1	.	.	.	.	.	1	.	.	.	.	2	.	.	.	.	.	.	.	.	4
189	SB	5	E	61580	CRY SER	F	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
190	SB	5	E	61580	TRI GYM	F	C	.	1	.	.	.	2	.	.	.	1	3	1	3	2	3	1	1	2	.	.	20
191	SB	5	E	61580	POA SPP	G	C	.	1	.	.	.	.	10	.	.	5	2	.	.	.	.	.	.	.	.	.	18
192	SB	5	E	61580	POA SPP	G	C	.	2	10	5	15	12	15	.	.	15	.	2	25	1	15	10	.	.	.	5	132
193	SB	5	E	61580	ERI EAT	F	C	.	1	.	1	2	1	.	.	.	1	1	.	.	2	.	1	.	.	1	.	11
194	SB	5	E	61580	UNK GRA	G	C	.	.	10	5	10	10	3	.	10	10	3	3	15	5	10	10	10	5	.	.	119
195	SB	5	E	61580	LUM SPP	F	C	.	.	1	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	3
196	SB	5	E	61580	ARA SPP	F	C	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
197	SB	5	E	61580	LIT SPP	F	C	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
198	SB	5	E	61580	SPH CUC	F	C	.	.	.	1	2	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	5
199	SB	5	E	61580	AGO GLA	F	C	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
200	SB	5	E	61580	AST DIV	F	C	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	4
201	SB	5	E	61580	TOW INC	F	C	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1
202	SB	5	E	61580	ORY HYM	G	C	.	.	.	.	.	.	.	1	2	3	.	.	.	.	3	.	.	.	.	.	9
203	SB	5	E	61580	SEN INT	F	C	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	5	.	7
204	SB	5	E	61580	TAR OFF	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1
205	SB	5	E	61580	DEL NEL	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	2
206	SB	5	E	61580		R		70	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	.	75
207	SB	5	E	61580		D	C	.	20	60	.	2	40	30	20	25	15	5	15	10	10	15	12	5	75	95	20	474
208	SB	5	E	61580		B	C	30	50	20	60	50	30	70	60	45	65	95	70	45	85	60	40	30	10	5	35	975
209	SB	5	E	61580	CAS SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	4
210	SB	5	E	61580	UNK GRA	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	2
211	SB	5	E	61580	DES RIC	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	1	2
212	SB	5	E	61580	POA SPP	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	10	5	25
213	SB	5	E	61580	COM UMB	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
214	SH	6	A	61180	ART TRI	S	C	8	17	16	26	1	9	1	1	12	26	22	3	1	18	23	22	23	14	15	11	269
215	SH	6	A	61180	ART TRI	S	D	22	21	22	20	26	22	23	24	16	21	17	23	23	16	19	15	17	16	17	29	409
216	SB	6	A	61180	AME UTA	S	C	.	.	.	.	.	.	.	.	.	.	2	.	.	.	1	.	.	.	.	3	6

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OBS	VEG_TYPE	CLAIM	TRANSECT	DATE	SPECIES	GR_FRM	PAR	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
217	SB	6	A	61180	AME UTA	S	D	1	.	.	1	.	1	.	2	2	2	8	3	.	.	2	1	1	1	1	2	28
218	SB	6	A	61180	SYM ORE	S	C	.	.	5	.	.	.	.	.	2	.	.	.	.	.	.	.	.	7	.	.	14
219	SB	6	A	61180	SYM ORE	S	D	.	.	.	1	.	1	.	1	5	.	.	.	.	.	5	.	5	6	10	3	37
220	SB	6	A	61180	CHR NAU	S	C	.	.	.	.	.	.	.	.	.	.	.	.	3	1	5	.	.	.	4	.	13
221	SB	6	A	61180	CHR NAU	S	D	8	1	1	5	2	1	1	.	5	1	.	4	2	9	7	3	10	3	.	4	67
222	SB	6	A	61180	JUN OST	T	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
223	SB	6	A	61180	JUN OST	T	D	.	.	.	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	3
224	SB	6	A	61180	PIN EDU	T	D	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1
225	SB	6	A	61680	POA SPP	G	C	5	4	10	15	15	15	25	20	15	10	10	30	10	25	25	20	10	.	35	18	317
226	SB	6	A	61680	PHL HOO	F	C	4	2	.	.	.	1	.	.	2	.	.	.	.	.	.	.	.	.	.	.	9
227	SB	6	A	61680	PHL LON	F	C	2	.	2	3	.	2	.	1	3	2	.	1	.	1	3	1	3	.	5	3	32
228	SB	6	A	61680	STI COM	G	C	2	.	10	.	.	.	.	10	5	.	3	.	.	.	.	3	15	.	3	2	53
229	SB	6	A	61680	CAS SPP	F	C	3	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	4
230	SB	6	A	61680	KOE GRA	G	C	2	2	.	.	2	.	.	2	.	4	.	.	.	.	.	.	.	.	.	1	13
231	SB	6	A	61680	TRI GYM	F	C	2	.	.	.	.	.	1	2	.	3	4	1	2	.	.	3	1	.	2	2	23
232	SB	6	A	61680	AST PUR	F	C	3	1	.	.	2	1	.	.	.	.	.	2	.	.	.	.	.	.	.	.	9
233	SB	6	A	61680	CRY SER	F	C	2	1	.	4	3	.	.	.	.	4	.	.	.	3	2	2	1	.	1	.	23
234	SB	6	A	61680	BUR SPP	F	C	.	.	.	.	.	2	.	.	.	.	.	1	1	1	.	.	1	.	.	.	6
235	SB	6	A	61680	ERI EAT	F	C	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	1	1	4
236	SB	6	A	61680	ARA SPP	F	C	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	2
237	SB	6	A	61680	AGO GLA	F	C	.	4	.	.	3	.	4	.	.	.	2	.	.	2	.	.	.	.	.	.	15
238	SB	6	A	61680	SIS LIN	F	C	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
239	SB	6	A	61680	LUP ARG	F	C	.	3	2	4	15	5	5	.	4	7	12	.	2	5	.	4	.	1	.	.	69
240	SB	6	A	61680	SEN INT	F	C	.	5	10	5	10	3	.	.	5	5	.	5	.	10	3	8	20	.	7	8	104
241	SB	6	A	61680	LUM SPP	F	C	.	1	2	3	.	2	1	1	1	1	1	1	.	.	2	.	.	.	1	.	17
242	SB	6	A	61680	CRE OCC	F	C	.	.	2	3	3	5	.	1	.	3	.	4	.	.	3	3	.	.	2	3	32
243	SB	6	A	61680	SPH COC	F	C	.	.	3	5	2	.	.	.	.	.	.	1	.	.	1	.	.	.	.	.	12
244	SB	6	A	61680	BRO TEC	G	C	.	.	4	15	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	24
245	SB	6	A	61680	HED BOR	F	C	.	.	.	5	.	8	.	.	.	.	7	12	.	.	.	.	.	.	.	.	32
246	SB	6	A	61680	AGR SPP	G	C	.	.	.	2	3	.	.	.	5	4	.	.	1	.	2	.	.	.	1	.	18
247	SB	6	A	61680	ORY HYM	G	C	.	.	.	2	4	5	.	5	.	.	.	.	.	.	.	.	.	.	.	.	16
248	SB	6	A	61680	UNK SPP	F	C	.	.	.	.	.	.	.	.	1	.	3	.	2	1	.	.	.	.	.	1	8
249	SB	6	A	61680	IPO AGG	F	C	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	1
250	SB	6	A	61680	PHY FLO	F	C	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	.	2
251	SB	6	A	61680	COM UMB	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	1	.	.	3
252	SB	6	A	61680	DES RIC	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1

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OBS	VEG_TYP	LOCATION	TRANSECT	DATE	SPECIES	GK_FRM	PART	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
253	SB	6	A	61680	CHE SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1
254	SB	6	A	61680		M	C	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5
255	SB	6	A	61680		R	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
256	SB	6	A	61680		B	C	85	20	25	15	20	40	15	15	45	40	45	20	70	15	25	30	15	10	20	20	590
257	SB	6	A	61680		D	C	10	40	25	20	25	15	30	40	10	15	15	25	10	25	20	20	35	80	15	25	500
258	SB	6	B	61180	ART TRI	S	C	6	29	15	21	6	15	13	1	6	12	7	6	2	5	13	9	7	2	2	12	189
259	SB	6	B	61180	ART TRI	S	D	19	28	26	19	15	17	21	14	18	19	18	19	21	22	16	14	16	23	21	21	387
260	SB	6	B	61180	CHR NAU	S	C	4	.	1	1	.	.	.	.	.	.	.	.	.	.	.	4	2	2	.	.	14
261	SB	6	B	61180	CHR NAU	S	D	8	18	7	8	6	6	3	1	1	8	10	7	7	2	7	12	21	11	6	4	153
262	SB	6	B	61180	AME UTA	S	C	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	3
263	SB	6	B	61180	AME UTA	S	D	2	.	2	.	2	1	1	2	.	.	1	1	1	1	.	1	.	.	.	1	16
264	SB	6	B	61180	SYM ORE	S	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
265	SB	6	B	61180	SYM ORE	S	D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
266	SB	6	B	61180	CHR DEP	S	C	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	.	3
267	SB	6	B	61180	CHR DEP	S	D	.	.	.	.	.	.	.	.	7	3	.	.	.	.	.	2	.	.	.	.	12
268	SB	6	B	61180	TET CAN	S	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
269	SB	6	B	61180	TET CAN	S	D	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
270	SB	6	B	61180	PIN EDU	I	D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
271	SB	6	B	61680	POA SPP	G	C	10	15	3	10	25	3	.	10	10	15	5	10	15	15	20	15	10	10	15	10	226
272	SB	6	B	61680	AGR SPP	G	C	3	5	3	5	2	3	5	5	5	2	3	2	5	.	2	4	2	5	.	6	67
273	SB	6	B	61680	AGO GLA	F	C	.	.	.	.	.	.	.	.	1	.	5	.	2	2	.	.	.	1	.	.	11
274	SB	6	B	61680	CRE OCC	F	C	2	1	.	.	4	.	.	.	2	5	10	2	.	5	5	.	3	.	3	8	50
275	SB	6	B	61680	ERI EAT	F	C	3	.	3	1	1	.	2	3	.	3	.	.	.	2	1	2	.	.	.	.	21
276	SB	6	B	61680	PHL LON	F	C	3	.	.	2	.	.	.	2	4	4	.	3	.	.	3	3	2	2	.	3	31
277	SB	6	B	61680	BRO TEC	G	C	2	3	10	2	10	30	15	3	.	.	.	.	.	.	.	.	.	.	.	.	75
278	SB	6	B	61680	STI COM	G	C	2	5	.	4	5	.	.	.	.	.	5	15	5	5	.	4	5	5	2	.	62
279	SB	6	B	61680	TRI GYM	F	C	.	1	.	.	2	.	1	.	.	1	2	1	1	.	.	.	.	1	.	.	10
280	SB	6	B	61680	BAL SAG	F	C	.	.	25	10	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	.	45
281	SB	6	B	61680	CRY SER	F	C	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
282	SB	6	B	61680	LIT SPP	F	C	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	8	.	.	.	11
283	SB	6	B	61680	MED BOR	F	C	.	.	.	.	4	.	.	10	.	.	.	.	.	.	.	.	.	.	5	.	19
284	SB	6	B	61680	OPU SPP	F	C	.	.	.	.	3	.	.	.	5	6	.	.	.	.	.	.	.	.	.	.	14
285	SB	6	B	61680	LUM SPP	F	C	.	.	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.	.	.	3
286	SB	6	B	61680	RUE GRA	G	C	.	.	.	.	.	.	2	.	.	5	.	.	.	5	5	.	.	.	.	3	20
287	SB	6	B	61680	UNK SPP	F	C	.	.	.	.	.	.	2	.	1	1	3	.	1	.	.	.	.	.	.	.	8
288	SB	6	B	61680	AST PUR	F	C	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	2	.	.	.	3

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PARAM	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
289	SB	6	B	61680	ZIG VEN	F	C	.	.	.	.	.	.	.	1	.	.	.	.	.	.	2	.	.	.	.	1	4
290	SB	6	B	61680	AST DIV	F	C	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
291	SB	6	B	61680	PEN SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	1	.	.	.	.	2
292	SB	6	B	61680	TOW INC	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
293	SB	6	B	61680	CUM UMB	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	.	.	.	5
294	SB	6	B	61680	IPO AGG	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	3
295	SB	6	B	61680	SPH COC	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	.	5
296	SB	6	B	61680		M	C	.	.	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	.	4
297	SB	6	B	61680		B	C	30	25	20	30	25	20	50	40	65	45	35	5	35	30	10	15	20	15	10	15	540
298	SB	6	B	61680		D	C	20	35	35	20	15	30	20	25	10	15	20	40	40	20	35	55	35	50	35	60	615
299	SB	6	C	61180	ART TRI	S	C	7	20	7	3	3	8	3	5	16	10	9	9	17	7	14	11	12	18	7	12	198
300	SB	6	C	61180	ART TRI	S	D	19	15	14	14	17	16	15	18	19	21	18	23	25	21	19	20	17	20	22	18	371
301	SB	6	C	61180	CHR NAU	S	C	.	.	.	.	.	.	3	.	.	.	.	.	1	3	.	.	.	.	.	.	7
302	SB	6	C	61180	CHR NAU	S	D	.	4	4	10	4	9	9	9	1	1	6	12	7	2	2	7	6	.	.	.	93
303	SB	6	C	61180	AME UTA	S	C	.	.	2	.	.	.	.	.	.	.	.	.	11	.	.	.	.	.	.	.	13
304	SB	6	C	61180	AME UTA	S	D	1	2	1	2	1	2	.	2	.	1	2	.	3	2	1	.	2	.	1	3	26
305	SB	6	C	61180	SYM ORE	S	D	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1
306	SB	6	C	61680	POA SPP	G	C	10	20	15	15	25	20	15	15	25	15	10	20	10	25	15	5	25	20	10	15	330
307	SB	6	C	61680	AGR SPP	G	C	2	4	5	3	3	5	5	5	5	5	.	3	3	.	.	.	2	3	5	5	63
308	SB	6	C	61680	STI COM	G	C	2	5	8	5	.	.	5	.	.	.	2	.	5	3	8	4	.	10	10	5	72
309	SB	6	C	61680	CRE OCC	F	C	2	10	4	2	.	4	.	2	.	4	4	5	1	2	.	.	.	.	.	1	41
310	SB	6	C	61680	TOW INC	F	C	2	.	1	5	8	1	1	.	.	.	.	.	.	1	.	.	.	.	.	1	20
311	SB	6	C	61680	TRI GYM	F	C	1	.	1	2	2	.	1	1	2	2	1	3	.	1	.	.	2	.	1	1	21
312	SB	6	C	61680	PHL LON	F	C	2	.	1	2	.	1	3	.	3	1	2	2	2	.	1	2	.	.	3	2	27
313	SB	6	C	61680	PHL HOO	F	C	3	.	1	.	.	2	.	.	2	.	.	1	5	.	2	.	.	.	.	.	16
314	SB	6	C	61680	CAS SPP	F	C	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	2
315	SB	6	C	61680	HED BOR	F	C	2	15	7	5	.	12	8	.	.	5	.	.	.	.	.	12	.	.	.	.	66
316	SB	6	C	61680	KOE GRA	G	C	3	.	.	.	.	3	.	5	10	4	.	5	.	.	.	4	.	.	.	.	34
317	SB	6	C	61680	SPH COC	F	C	.	.	3	2	.	.	.	15	5	.	1	5	2	.	.	.	.	.	.	1	34
318	SB	6	C	61680	ERI EAT	F	C	.	.	.	.	2	.	.	.	.	2	2	3	2	.	1	2	1	.	.	3	18
319	SB	6	C	61680	AGO GLA	F	C	1	5	.	.	.	1	1	2	.	.	.	.	.	1	.	2	5	5	1	2	26
320	SB	6	C	61680	AST PUR	F	C	.	.	.	2	.	.	.	2	.	.	.	.	.	.	1	.	.	.	.	.	5
321	SB	6	C	61680	AST DIV	F	C	2	.	.	.	1	.	.	.	.	3	1	4	.	.	.	.	.	.	.	3	14
322	SB	6	C	61680	LOM SPP	F	C	1	.	1	.	.	.	.	1	.	.	1	.	.	1	.	.	.	.	.	.	5
323	SB	6	C	61680	UNK SPP	F	C	.	.	1	1	.	.	.	.	2	2	.	.	.	.	.	.	.	.	.	.	6
324	SB	6	C	61680	COM UMB	F	C	.	.	.	3	1	1	1	.	.	.	.	.	1	1	.	.	1	.	1	.	10

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PARAM	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
325	SB	6	C	61680	BRO TEC	G	C	.	.	.	.	.	2	.	.	2	.	.	.	.	.	.	.	.	.	.	.	4
326	SB	6	C	61680	ZIG VEN	F	C	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	1	3
327	SB	6	C	61680	PEN SPP	F	C	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2	3
328	SB	6	C	61680	BAL SAG	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	20	.	.	.	2	.	.	22
329	SB	6	C	61680	CRY SER	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	10	.	11
330	SB	6	C	61680	ORY HYM	G	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
331	SB	6	C	61680		M	C	.	.	.	.	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	.	8
332	SB	6	C	61680		B	C	15	25	15	20	15	20	15	15	35	20	15	15	10	20	20	30	20	45	15	10	395
333	SB	6	C	61680		B	C	50	10	25	55	35	25	50	35	20	45	25	40	45	25	30	25	30	20	40	55	685
334	SB	6	D	61280	ART TRI	S	C	3	13	1	.	9	1	9	5	15	13	4	4	1	17	18	7	23	9	22	16	190
335	SB	6	D	61280	ART TRI	S	D	17	17	20	14	21	14	14	15	16	14	12	12	16	20	18	13	17	22	21	16	329
336	SB	6	D	61280	AME UTA	S	C	5	.	.	.	12	.	.	8	.	2	.	5	3	.	.	.	.	.	.	.	35
337	SB	6	D	61280	AME UTA	S	D	1	2	2	.	1	.	.	3	.	3	.	3	7	1	.	.	1	1	2	2	29
338	SB	6	D	61280	SYM ORE	S	C	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	1
339	SB	6	D	61280	SYM ORE	S	D	.	.	.	.	.	.	4	1	.	.	.	1	.	.	.	.	1	1	.	3	11
340	SB	6	D	61280	CHR NAU	S	C	.	.	.	.	2	2	.	.	.	.	.	1	1	.	.	.	.	1	.	.	7
341	SB	6	D	61280	CHR NAU	S	D	6	3	5	5	13	9	16	8	8	3	3	14	8	12	13	13	9	12	7	10	177
342	SB	6	D	61280	TET CAN	S	C	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	2
343	SB	6	D	61280	TET CAN	S	D	4	10	2	3	.	3	.	6	2	.	6	4	.	.	.	4	3	7	.	.	54
344	SB	6	D	61780	POA SPP	G	C	5	5	15	8	.	8	3	.	.	20	10	15	5	.	10	20	15	3	15	2	159
345	SB	6	D	61780	PHL HOO	F	C	.	.	2	3	5	4	3	.	.	5	10	3	8	.	1	.	.	.	5	12	61
346	SB	6	D	61780	PHL LON	F	C	2	.	.	2	2	1	5	4	.	2	.	2	2	.	.	5	.	1	1	1	30
347	SB	6	D	61780	AGR SPP	G	C	.	.	.	.	.	4	.	.	.	5	.	.	.	.	.	.	.	.	.	.	9
348	SB	6	D	61780	STI COM	G	C	8	.	.	.	2	.	3	4	.	3	.	.	.	.	.	.	.	.	.	4	24
349	SB	6	D	61780	HED BOR	F	C	30	15	3	6	3	10	5	.	.	3	.	15	.	.	10	4	.	.	.	.	104
350	SB	6	D	61780	CRE OLC	F	C	.	.	.	.	3	3	.	3	.	8	.	.	.	.	.	.	5	10	.	.	32
351	SB	6	D	61780	ERI EAT	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1	.	.	3
352	SB	6	D	61780	ORY HYM	G	C	.	10	5	10	.	8	5	.	8	.	10	5	.	.	10	.	.	5	.	.	76
353	SB	6	D	61780	CRY SER	F	C	.	.	2	.	5	2	.	3	1	2	.	.	.	12	1	5	.	4	4	1	42
354	SB	6	D	61780	LUP ARG	F	C	1	.	.	1	.	2	30	35	15	12	.	3	15	25	12	25	15	15	3	12	221
355	SB	6	D	61780	KOE GRA	G	C	10	.	3	4	8	10	.	.	8	.	.	5	1	.	5	10	5	8	2	8	87
356	SB	6	D	61780	AST PUR	F	C	1	.	.	.	.	.	.	.	4	5	1	.	.	.	2	1	.	.	.	.	14
357	SB	6	D	61780	COM UMB	F	C	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3
358	SB	6	D	61780	ARA SPP	F	C	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
359	SB	6	D	61780	UNK COM	F	C	.	4	1	2	.	.	.	.	.	.	6	5	.	.	.	.	.	.	.	1	19
360	SB	6	D	61780	AGO GLA	F	C	.	.	2	.	.	.	.	2	2	.	.	.	1	.	.	1	.	3	.	2	13

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361	SB	6	D	61780	TRI GYM	F	C	.	.	2	1	.	.	.	1	.	.	.	.	.	.	1	.	.	1	2	2	10
362	SB	6	D	61780	SEN MUL	F	C	.	.	2	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4
363	SB	6	D	61780	LIN LEW	F	C	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
364	SB	6	D	61780	HAP NUT	F	C	.	.	.	2	.	.	.	.	.	8	.	.	.	.	.	.	.	.	.	.	.	10
365	SB	6	D	61780	DEL NEL	F	C	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
366	SB	6	D	61780	PHY FLO	F	C	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	2
367	SB	6	D	61780	TOW INC	F	C	.	.	.	.	.	1	.	.	.	1	4	.	.	.	.	2	.	.	.	.	.	8
368	SB	6	D	61780	LOM SPP	F	C	.	.	.	.	.	1	.	.	.	.	3	.	.	.	.	.	1	1	.	.	.	6
369	SB	6	D	61780	SPH COC	F	C	.	.	.	.	.	.	4	.	1	.	3	.	.	.	1	.	.	.	.	.	.	9
370	SB	6	D	61780	BRO TEC	G	C	.	.	.	.	.	.	.	3	3	.	.	.	.	.	.	.	.	.	.	.	.	6
371	SB	6	D	61780	ERI UMB	F	C	.	.	.	.	.	.	.	15	.	.	.	.	.	.	.	.	.	.	.	.	.	15
372	SB	6	D	61780		R	C	.	40	.	25	.	20	.	.	.	10	10	.	10	.	.	.	.	.	.	.	.	115
373	SB	6	D	61780		M	C	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10	.	.	.	15
374	SB	6	D	61780		B	C	45	20	55	20	15	25	40	25	15	20	30	45	20	20	20	10	10	20	45	20	520
375	SB	6	D	61780		D	C	10	.	10	10	15	10	15	40	75	25	5	5	25	40	65	80	80	50	15	40	615
376	SB	6	D	61780	SEN INT	F	C	.	.	.	.	.	.	.	.	5	.	.	.	.	.	.	.	3	.	.	.	8
377	SB	6	D	61780	CAS SPP	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1
378	SB	6	E	61280	ART TRI	S	C	3	3	5	17	8	18	.	9	1	5	.	3	9	10	8	8	14	17	13	18	169
379	SB	6	E	61280	ART TRI	S	D	13	16	18	21	18	16	19	22	23	20	12	16	11	12	16	12	16	16	13	12	322
380	SB	6	E	61280	CHR NAU	S	C	.	.	2	13	4	6	1	.	.	.	.	3	1	1	.	.	3	.	1	3	38
381	SB	6	E	61280	CHR NAU	S	D	7	12	20	26	35	6	5	11	9	5	11	16	19	13	9	7	4	7	8	11	241
382	SB	6	E	61280	TET CAN	S	C	.	.	1	.	.	.	.	.	.	.	.	.	.	2	2	.	.	.	.	.	.	5
383	SB	6	E	61280	TET CAN	S	D	.	.	10	.	2	6	10	1	1	.	.	2	23	13	15	18	1	4	7	.	113
384	SB	6	E	61280	AME UTA	S	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
385	SB	6	E	61280	AME UTA	S	D	1	1	.	.	.	3	.	1	1	1	2	.	1	1	1	2	3	1	1	1	21
386	SB	6	E	61280	PIN EDU	T	D	1	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	1	3
387	SB	6	E	61280	PIN EDU	T	C	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	6
388	SB	6	E	61280	JUN OST	T	D	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	1
389	SB	6	E	61280	SYM ORE	S	D	.	.	.	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	.	2
390	SB	6	E	61780	POA SPP	G	C	10	20	10	.	.	.	3	.	1	2	10	3	10	18	10	10	4	15	15	5	146
391	SB	6	E	61780	AGR SPP	G	C	4	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	6
392	SB	6	E	61780	ORY HYM	G	C	2	.	.	.	.	5	4	4	5	.	.	10	.	.	2	8	8	.	8	2	58
393	SB	6	E	61780	BRO TEC	G	C	1	2	45	.	30	.	.	.	.	.	.	.	3	1	10	35	.	.	.	.	127
394	SB	6	E	61780	SIT CUM	G	C	2	.	.	.	.	2	.	.	.	1	4	.	.	.	3	4	.	.	.	.	16
395	SB	6	E	61780	PHL HOO	F	C	3	.	.	.	3	1	1	3	3	3	.	2	.	.	.	.	.	10	5	2	36
396	SB	6	E	61780	PHL LON	F	C	2	2	.	.	2	1	.	.	.	1	.	2	.	.	.	.	.	1	.	.	11

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OBS	VEG_TYPE	LOCATION	TRANSECT	DATE	SPECIES	GR_FRM	PAR	PLT1	PLT2	PLT3	PLT4	PLT5	PLT6	PLT7	PLT8	PLT9	PLT10	PLT11	PLT12	PLT13	PLT14	PLT15	PLT16	PLT17	PLT18	PLT19	PLT20	COVER
397	SB	6	E	61780	HED BOR	F	C	25	.	20	.	.	.	.	8	4	.	.	8	.	8	.	.	.	.	10	8	91
398	SB	6	E	61780	ERY ASP	F	C	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
399	SB	6	E	61780	PHY FLO	F	C	2	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.	4
400	SB	6	E	61780	ERI EAT	F	C	.	2	.	.	.	.	1	.	.	.	.	2	1	.	.	.	.	.	.	.	6
401	SB	6	E	61780	KOE GRA	G	C	.	10	5	5	10	.	5	8	2	10	15	1	5	2	.	.	.	8	3	.	89
402	SB	6	E	61780	CUM UMB	F	C	.	2	.	.	.	4	.	.	.	.	.	.	.	.	.	.	1	.	.	.	7
403	SB	6	E	61780	SEN MUL	F	C	.	3	.	.	.	.	3	2	.	2	.	.	.	.	.	.	.	.	4	.	14
404	SB	6	E	61780	CHA DOU	F	C	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
405	SB	6	E	61780	CRY SER	F	C	.	3	.	.	.	.	.	4	.	.	3	.	.	.	.	.	2	1	3	5	21
406	SB	6	E	61780	LUP ARG	F	C	.	5	.	5	15	2	3	10	.	12	35	.	.	.	8	1	6	6	.	5	113
407	SB	6	E	61780	AGO GLA	F	C	.	.	4	.	2	.	.	.	.	.	.	.	2	3	.	3	.	5	.	1	20
408	SB	6	E	61780	SIS LIN	F	C	.	.	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
409	SB	6	E	61780	LIN LEW	F	C	.	.	2	.	.	.	.	.	4	.	.	.	.	.	.	.	.	.	.	.	6
410	SB	6	E	61780	TRI GYM	F	C	.	.	2	.	.	.	.	.	.	2	.	1	.	.	.	.	2	.	.	.	7
411	SB	6	E	61780	DEL NEL	F	C	.	.	.	.	1	.	.	.	.	.	.	.	1	1	.	.	.	.	.	.	3
412	SB	6	E	61780	SPH COC	F	C	.	.	.	.	3	.	.	.	.	.	.	.	.	2	2	.	1	.	1	1	10
413	SB	6	E	61780	CRE OCC	F	C	.	.	.	.	.	5	.	.	.	.	.	.	.	1	.	.	.	.	.	.	6
414	SB	6	E	61780	HAP NUT	F	C	.	.	.	.	.	.	4	.	8	8	.	.	.	4	.	.	.	.	.	.	24
415	SB	6	E	61780	UNK COM	F	C	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1
416	SB	6	E	61780		M	C	.	5	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	10	10	.	30
417	SB	6	E	61780		R	C	40	10	25	.	.	25	40	20	35	35	.	30	15	10	10	35	10	25	10	.	375
418	SB	6	E	61780		B	C	20	20	.	10	10	35	20	40	20	20	20	25	25	35	35	20	55	15	35	25	485
419	SB	6	E	61780		D	C	.	40	40	80	80	10	10	15	5	10	25	10	35	15	20	10	15	40	20	10	490
420	SB	6	E	61780	AST PUR	F	C	.	.	.	.	.	.	.	.	.	.	4	.	2	.	.	.	.	.	.	.	6
421	SB	6	E	61780	ERI UMB	F	C	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	2

APPENDIX 3-1.2

Analyses for 1980 Phytosociological Studies Data

Results of a nested ANOVA comparing grass, forb, shrub, and tree coverage by transect nested within location (analyses correspond to those summarized on Table 3-2 a).

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=FORB

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
LOCATION	2	5 6
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 214

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 212 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=FORB

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	0.00123807	0.00013756	0.82	0.6011	0.035174	165.6958
ERROR	202	0.03396026	0.00016812		STD DEV		ASFG MEAN
CORRECTED TOTAL	211	0.03519833			0.01296611		0.00782525

SOURCE	DF	TYPE I SS	F VALUE	PR > F
LOCATION	1	0.00052782	3.14	0.0779
TRANSECT	4	0.00021113	0.31	0.8684
LOCATION(TRANSECT)	4	0.00049912	0.74	0.5642

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=GRASS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
LOCATION	2	5 6
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 59

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 58
OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=GRASS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	0.00536137	0.00059571	0.43	0.9118	0.074753	118.8004
ERROR	48	0.06635933	0.00138249		STD DEV		ASFG MEAN
CORRECTED TOTAL	57	0.07172070			0.03718180		0.03129771

SOURCE	DF	TYPE I SS	F VALUE	PR > F
LOCATION	1	0.00346783	2.51	0.1198
TRANSECT	4	0.00151077	0.27	0.8938
LOCATION(TRANSECT)	4	0.00038277	0.07	0.9910

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=SHRUB

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
LOCATION	2	5 6
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 44

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES, HOWEVER, ONLY 41
OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=SHRUB

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	0.00838712	0.00093190	0.10	0.9995	0.028226	142.8605
ERROR	31	0.28875717	0.00931475		STD DEV		ASTS MEAN
CORRECTED TOTAL	40	0.29714429			0.09651294		0.06755748

SOURCE	DF	TYPE I SS	F VALUE	PR > F
LOCATION	1	0.00097658	0.10	0.7483
TRANSECT	4	0.00243352	0.07	0.9918
LOCATION(TRANSECT)	4	0.00497702	0.13	0.9688

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=TREE

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
LOCATION	2	5 6
TRANSECT	4	A C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 6

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 5 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

NESTED ANALYSIS OF VARIANCE BY GROWTH FORM

GR_FRM=TREE

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	3	0.00002630	0.00000877	1.95	0.4745	0.853898	55.8241
ERROR	1	0.00000450	0.00000450		STD DEV		ASTS MEAN
CORRECTED TOTAL	4	0.00003080			0.00212133		0.00380002

SOURCE	DF	TYPE I SS	F VALUE	PR > F
LOCATION	1	0.00000605	1.34	0.4531
TRANSECT	2	0.00002025	2.25	0.4264
LOCATION(TRANSECT)	0	0.00000000	.	.

Results of a one-way ANOVA comparing grass, forb, shrub, and tree coverage among transects within treatment and control locations (analyses correspond to those summarized on Table 3-2 b).

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=FORB LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 106

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 104 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=FORB LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00020412	0.00005103	0.46	0.7646	0.018262	169.3361
ERROR	99	0.01097332	0.00011084		STD DEV		ASFG MEAN
CORRECTED TOTAL	103	0.01117744			0.01052814		0.00621730

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00020412	0.46	0.7646

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=FORB LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 108

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=FORB LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00050612	0.00012653	0.57	0.6872	0.021544	159.3725
ERROR	103	0.02298693	0.00022317		STD DEV		ASFG MEAN
CORRECTED TOTAL	107	0.02349306			0.01493901		0.00937365

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00050612	0.57	0.6872

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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=GRASS LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 30

RIO BLANCO OIL SHALE COMPANY
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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=GRASS LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00052674	0.00013169	0.21	0.9329	0.031840	106.2273
ERROR	25	0.01601655	0.00064066		STD DEV		ASFG MEAN
CORRECTED TOTAL	29	0.01654329			0.02531130		0.02382749

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00052674	0.21	0.9329

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PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=GRASS LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 29

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 28 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=GRASS LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASFG

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00136679	0.00034170	0.16	0.9583	0.026432	119.0407
ERROR	23	0.05034278	0.00218882		STD DEV		ASFG MEAN
CORRECTED TOTAL	27	0.05170958			0.04678479		0.03930152

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00136679	0.16	0.9583

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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=SHRUB LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 22

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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=SHRUB LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00453158	0.00113290	0.13	0.9687	0.030029	128.7102
ERROR	17	0.14637312	0.00861018		STD DEV		ASTS MEAN
CORRECTED TOTAL	21	0.15090470			0.09279107		0.07209300

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00453158	0.13	0.9687

RIO BLANCO OIL SHALE COMPANY
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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=SHRUB LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	5	A B C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 22

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 19
OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=SHRUB LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	4	0.00287896	0.00071974	0.07	0.9898	0.019819	161.8594
ERROR	14	0.14238405	0.01017029		STD DEV		ASTS MEAN
CORRECTED TOTAL	18	0.14526300			0.10084785		0.06230582

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	4	0.00287896	0.07	0.9898

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=TREE LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	3	C D E

NUMBER OF OBSERVATIONS IN BY GROUP = 4

RIO BLANCO OIL SHALE COMPANY
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UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=TREE LOCATION=5

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	0.00002025	0.00001013	2.25	0.4264	0.818184	65.2713
ERROR	1	0.00000450	0.00000450		STD DEV		ASTS MEAN
CORRECTED TOTAL	3	0.00002475			0.00212133		0.00325002

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	2	0.00002025	2.25	0.4264

RIO BLANCO OIL SHALE COMPANY
PHYTOSOCIOLOGICAL STUDIES PROGRAM
UPLAND SAGEBRUSH - 1980

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=TREE LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	2	A E

NUMBER OF OBSERVATIONS IN BY GROUP = 2

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 1 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

ONE-WAY ANALYSIS OF VARIANCE

GR_FRM=TREE LOCATION=6

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASTS

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0	0	99999.99	0.0000	0.000000	0.0000
ERROR	0	0	0		STD DEV		ASTS MEAN
CORRECTED TOTAL	0	0			0		0.00600004

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	0	0	.	.

APPENDIX 3-1.3

Range Productivity and Utilization Data for 1980

Vegetation types corresponding to abbreviations (Veg Type column) are mixed brush (MB), pinyon-juniper (PJ) and upland sagebrush (SB). Scientific names associated with species abbreviations are presented in Appendix 3-1.1. Plot type 'Y' represents a caged plot and 'N' an uncaged plot. Estimated, green, and dry weights are in grams per square meter. Data for caged ('Y') plots are actual values whereas those for uncaged plots are determined using corrected estimations.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
1	MB	AGR SPP	G	1	Y	3	1.5	1.0	10.0	8.9
1	MB	ERI UMB	F	1	Y	3	3.5	3.1	31.0	27.6
1	MB	HED BOR	F	1	Y	9	10.5	5.7	57.0	50.7
1	MB	ORY HYM	G	1	Y	11	25.0	14.7	147	131
1	MB	POA SPP	G	1	Y	0.5	0.5	0.3	3.0	2.7
1	MB	AGR SPP	G	2	N	14	20.1	12.6	126	113
1	MB	LIN LEW	F	2	N	1.5	2.0	1.2	11.6	10.4
1	MB	ORY HYM	G	2	N	6	8.0	4.7	47.2	42.0
1	MB	PEN CAE	F	2	N	0.5	0.7	0.4	3.9	3.5
1	MB	POA SPP	G	2	N	2	2.7	1.6	16.0	14.2
1	MB	UNK COM	F	2	N	0.5	0.7	0.4	4.0	3.5
1	MB	AGR SPP	G	3	Y	10	19.5	11.4	114	101
1	MB	CRE SPP	F	3	Y	0.5	0.5	0.4	4.0	3.6
1	MB	HET VIL	F	3	Y	1	2.0	1.1	11.0	9.8
1	MB	IPO AGG	F	3	Y	0.5	1.0	0.6	6.0	5.3
1	MB	ORY HYM	G	3	Y	10	27.0	10.3	103	91.7
1	MB	PEN CAE	F	3	Y	2	4.0	2.3	23.0	20.5
1	MB	PHL LON	F	3	Y	0.5	0.5	0.8	8.0	7.1
1	MB	POA SPP	G	3	Y	5	9.5	5.4	54.0	48.1
1	MB	AGR SPP	G	4	N	6	8.6	5.4	54.2	48.2
1	MB	AST DIV	F	4	N	2	2.8	1.8	17.7	15.8
1	MB	CRE SPP	F	4	N	1	1.4	0.8	8.2	7.3
1	MB	CRY SER	F	4	N	0.5	0.7	0.4	4.1	3.7
1	MB	HET VIL	F	4	N	1	1.4	0.8	7.8	6.9
1	MB	LIT RUD	F	4	N	2.5	3.4	1.9	19.4	17.2
1	MB	POA SPP	G	4	N	2	2.7	1.6	16.0	14.2
1	MB	AGR SPP	G	5	N	4	5.8	3.6	36.1	32.2
1	MB	ERI UMB	F	5	N	0.5	0.7	0.4	4.0	3.5
1	MB	PHL LON	F	5	N	0.5	0.7	0.4	4.0	3.5
1	MB	POA SPP	G	5	N	8	10.8	6.4	64.0	57.0
1	MB	AGR SPP	G	6	N	4	5.8	3.6	36.1	32.2
1	MB	COM UMB	F	6	N	3	4.3	2.4	24.5	21.8
1	MB	CRU SPP	F	6	N	0.5	0.7	0.4	4.1	3.7
1	MB	ERI UMB	F	6	N	1	1.4	0.8	7.9	7.0
1	MB	HED BOR	F	6	N	3	4.1	2.3	23.2	20.7
1	MB	ORY HYM	G	6	N	4	5.4	3.1	31.5	28.0
1	MB	PHL LON	F	6	N	0.5	0.7	0.4	4.0	3.5
1	MB	PHY FLO	F	6	N	1.5	2.0	1.2	11.9	10.6
1	MB	AGR SPP	G	7	Y	20	21.0	15.3	153	136
1	MB	AST DIV	F	7	Y	1	1.5	0.9	9.0	8.0
1	MB	AST SPP	F	7	Y	0.5	0.5	0.6	6.0	5.3
1	MB	COM UMB	F	7	Y	20	29.5	12.0	120	107
1	MB	CRU SPP	F	7	Y	3.5	4.0	2.2	22.0	19.6
1	MB	ERI UMB	F	7	Y	2.5	3.5	2.1	21.0	18.7
1	MB	KOE CRI	G	7	Y	7	5.0	3.1	31.0	27.6
1	MB	ORY HYM	G	7	Y	8	9.5	6.7	67.0	59.6
1	MB	PEN CAE	F	7	Y	2.5	2.0	1.5	15.0	13.3
1	MB	PHL LON	F	7	Y	1	0.5	0.5	5.0	4.4
1	MB	POA SPP	G	7	Y	3	7.0	4.4	44.0	39.2
1	MB	AGR SPP	G	8	Y	4	4.5	2.8	28.0	24.9

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
1	MB	COM UMB	F	8	Y	3	3.5	1.7	17.0	15.1
1	MB	ERI UMB	F	8	Y	1.5	3.5	1.8	18.0	16.0
1	MB	ORY HYM	G	8	Y	7	7.0	4.9	49.0	43.6
1	MB	PHL LON	F	8	Y	0.5	0.5	0.4	4.0	3.6
1	MB	PHY FLO	F	8	Y	3	6.0	2.2	22.0	19.6
1	MB	AGR SPP	G	9	N	9	12.9	8.1	81.3	72.3
1	MB	ORY HYM	G	9	N	5	6.7	3.9	39.3	35.0
1	MB	PEN CAE	F	9	N	1	1.3	0.8	7.9	7.0
1	MB	PHL LON	F	9	N	2	2.7	1.6	15.8	14.1
1	MB	PHY FLO	F	9	N	1	1.3	0.8	7.9	7.0
1	MB	POA SPP	G	9	N	6	8.1	4.8	48.0	42.7
1	MB	AGR SPP	G	10	Y	6	9.0	5.4	54.0	48.1
1	MB	COM UMB	F	10	Y	15	10.0	3.9	39.0	34.7
1	MB	CRY SER	F	10	Y	1.5	3.0	2.6	26.0	23.1
1	MB	HED BOR	F	10	Y	5	3.5	2.8	28.0	24.9
1	MB	HET VIL	F	10	Y	0.5	1.0	0.7	7.0	6.2
1	MB	LIN LEW	F	10	Y	2	2.0	1.0	10.0	8.9
1	MB	ORY HYM	G	10	Y	7	8.0	5.1	51.0	45.4
1	MB	PEN CAE	F	10	Y	3	6.0	3.3	33.0	29.4
1	MB	PHL LON	F	10	Y	0.5	1.0	0.5	5.0	4.4
1	MB	POA SPP	G	10	Y	2	1.5	1.1	11.0	9.8
1	MB	SIT HYS	G	10	Y	1	0.5	0.5	5.0	4.4
2	MB	AGR SPP	G	1	Y	5.5	10.0	6.0	60.0	53.4
2	MB	CRE SPP	F	1	Y	2.5	1.0	1.2	12.0	10.7
2	MB	ERI UMB	F	1	Y	1	1.5	1.4	14.0	12.5
2	MB	HET VIL	F	1	Y	1.5	1.0	1.0	10.0	8.9
2	MB	ORY HYM	G	1	Y	1.5	2.5	1.7	17.0	15.1
2	MB	POA SPP	G	1	Y	0.5	0.5	0.3	3.0	2.7
2	MB	AGR SPP	G	2	Y	22.5	30.0	23.8	238	212
2	MB	CRE SPP	F	2	Y	1	1.5	1.5	15.0	13.3
2	MB	ERI UMB	F	2	Y	4.5	5.0	3.5	35.0	31.1
2	MB	ORY HYM	G	2	Y	1	1.0	0.9	9.0	8.0
2	MB	PHL LON	F	2	Y	3	1.5	1.6	16.0	14.2
2	MB	POA SPP	G	2	Y	3	4.5	3.1	31.0	27.6
2	MB	AGR SPP	G	3	N	10	14.4	9.0	90.3	80.4
2	MB	COM UMB	F	3	N	13	18.5	10.6	106	94.4
2	MB	ERI LON	F	3	N	5	6.8	3.9	39.1	34.8
2	MB	ERI UMB	F	3	N	3	4.1	2.4	23.7	21.1
2	MB	HED BOR	F	3	N	3	4.1	2.3	23.2	20.7
2	MB	KOE CRI	G	3	N	4	5.4	3.1	31.1	27.7
2	MB	ORY HYM	G	3	N	4	5.4	3.1	31.5	28.0
2	MB	PHL LON	F	3	N	0.5	0.7	0.4	4.0	3.5
2	MB	PHY FLO	F	3	N	1	1.3	0.8	7.9	7.0
2	MB	AGR SPP	G	4	Y	10	8.0	5.3	53.0	47.2
2	MB	COM UMB	F	4	Y	2	3.0	1.3	13.0	11.6
2	MB	ERI UMB	F	4	Y	3.5	8.0	5.0	50.0	44.5
2	MB	HAP NUT	F	4	Y	3	2.5	1.5	15.0	13.3
2	MB	HED BOR	F	4	Y	15	17.0	13.1	131	117
2	MB	PHL LON	F	4	Y	0.5	0.0	0.4	4.0	3.6
2	MB	POA SPP	G	4	Y	1	3.0	1.4	14.0	12.5

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
2	MB	SPH COC	F	4	Y	2	1.0	1.2	12.0	10.7
2	MB	AGR SPP	G	5	N	3	4.3	2.7	27.1	24.1
2	MB	COM UMB	F	5	N	19	27.1	15.5	155	138
2	MB	CRU SPP	F	5	N	2	2.8	1.6	16.4	14.6
2	MB	HED BOR	F	5	N	12	16.3	9.3	92.9	82.7
2	MB	PHL LON	F	5	N	1	1.3	0.8	7.9	7.0
2	MB	POA SPP	G	5	N	10	13.5	8.0	80.0	71.2
2	MB	AGR SPP	G	6	N	4	5.8	3.6	36.1	32.2
2	MB	COM UMB	F	6	N	3	4.3	2.4	24.5	21.8
2	MB	CRY SER	F	6	N	1.5	2.1	1.2	12.4	11.0
2	MB	HED BOR	F	6	N	5	6.8	3.9	38.7	34.5
2	MB	ORY HYM	G	6	N	4.5	6.0	3.5	35.4	31.5
2	MB	PEN CAE	F	6	N	3.5	4.7	2.8	27.6	24.6
2	MB	AGR SPP	G	7	Y	6	10.0	5.4	54.0	48.1
2	MB	COM UMB	F	7	Y	1	1.5	0.7	7.0	6.2
2	MB	CRE SPP	F	7	Y	2	2.0	2.7	27.0	24.0
2	MB	ERI UMB	F	7	Y	2.5	5.0	3.0	30.0	26.7
2	MB	HED BOR	F	7	Y	19	27.5	15.1	151	134
2	MB	HET VIL	F	7	Y	0.5	0.5	0.6	6.0	5.3
2	MB	ORY HYM	G	7	Y	3	6.5	4.0	40.0	35.6
2	MB	PHY FLO	F	7	Y	0.5	0.5	0.5	5.0	4.4
2	MB	AGR SPP	G	8	N	4	5.8	3.6	36.1	32.2
2	MB	BRO TEC	G	8	N	0.5	0.7	0.4	4.4	3.9
2	MB	COM UMB	F	8	N	4.5	6.4	3.7	36.7	32.7
2	MB	CRE SPP	F	8	N	1	1.4	0.8	8.2	7.3
2	MB	CRU SPP	F	8	N	0.5	0.7	0.4	4.1	3.7
2	MB	ERI UMB	F	8	N	2.5	3.4	2.0	19.8	17.6
2	MB	KOE CRI	G	8	N	2	2.7	1.6	15.5	13.8
2	MB	LIN LEW	F	8	N	2	2.7	1.6	15.5	13.8
2	MB	ORY HYM	G	8	N	10	13.4	7.9	78.6	70.0
2	MB	POA SPP	G	8	N	6	8.1	4.8	48.0	42.7
2	MB	AGR SPP	G	9	N	10	14.4	9.0	90.3	80.4
2	MB	COM UMB	F	9	N	2	2.9	1.6	16.3	14.5
2	MB	HYM ACA	F	9	N	0.5	0.7	0.4	3.9	3.5
2	MB	ORY HYM	G	9	N	1	1.3	0.8	7.9	7.0
2	MB	PEN CAE	F	9	N	0.5	0.7	0.4	3.9	3.5
2	MB	PHY FLO	F	9	N	0.5	0.7	0.4	4.0	3.5
2	MB	POA SPP	G	9	N	3	4.0	2.4	24.0	21.4
3	MB	AGR SPP	G	1	Y	8	12.5	7.0	70.0	62.3
3	MB	AST DIV	F	1	Y	1.5	2.0	1.1	11.0	9.8
3	MB	COM UMB	F	1	Y	10	11.5	4.6	46.0	40.9
3	MB	CRE SPP	F	1	Y	4	7.5	6.8	68.0	60.5
3	MB	HED BOR	F	1	Y	20	59.5	28.9	289	257
3	MB	HET VIL	F	1	Y	2	4.0	2.1	21.0	18.7
3	MB	KOE CRI	G	1	Y	0.5	0.5	0.6	6.0	5.3
3	MB	PEN CAE	F	1	Y	1	3.5	1.8	18.0	16.0
3	MB	PHL LON	F	1	Y	0.5	0.5	0.4	4.0	3.6
3	MB	POA SPP	G	1	Y	5	17.5	10.0	100	89.0
3	MB	AGR SPP	G	2	Y	3	4.0	2.3	23.0	20.5
3	MB	COM UMB	F	2	Y	2.5	2.0	0.9	9.0	8.0

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
3	MB	HED BOR	F	2	Y	120	141	67.5	675	601
3	MB	HET VIL	F	2	Y	1	2.0	1.0	10.0	8.9
3	MB	LUP ARG	F	2	Y	3	2.5	2.6	26.0	23.1
3	MB	POA SPP	G	2	Y	25	28.0	13.9	139	124
3	MB	AGR SPP	G	3	N	11	15.8	9.9	99.3	88.4
3	MB	COM UMB	F	3	N	10	14.3	8.2	81.6	72.6
3	MB	ERI UMB	F	3	N	1	1.4	0.8	7.9	7.0
3	MB	HET VIL	F	3	N	1.5	2.0	1.2	11.7	10.4
3	MB	POA SPP	G	3	N	2	2.7	1.6	16.0	14.2
3	MB	AGR SPP	G	4	N	4	5.8	3.6	36.1	32.2
3	MB	COM UMB	F	4	N	3	4.3	2.4	24.5	21.8
3	MB	CRE SPP	F	4	N	1	1.4	0.8	8.2	7.3
3	MB	ERI UMB	F	4	N	2	2.7	1.6	15.8	14.1
3	MB	HET VIL	F	4	N	1	1.4	0.8	7.8	6.9
3	MB	PEN CAE	F	4	N	0.5	0.7	0.4	3.9	3.5
3	MB	POA SPP	G	4	N	2	2.7	1.6	16.0	14.2
3	MB	AGR SPP	G	5	Y	6	10.5	7.2	72.0	64.1
3	MB	COM UMB	F	5	Y	12	24.0	9.3	93.0	82.8
3	MB	CRE SPP	F	5	Y	1.5	1.0	1.6	16.0	14.2
3	MB	HET VIL	F	5	Y	2	2.5	1.9	19.0	16.9
3	MB	KOE CRI	G	5	Y	2	3.5	2.2	22.0	19.6
3	MB	LUP ARG	F	5	Y	14	13.0	13.7	137	122
3	MB	ORY HYM	G	5	Y	3.5	5.0	3.3	33.0	29.4
3	MB	POA SPP	G	5	Y	14	25.5	17.3	173	154
3	MB	AGR SPP	G	6	N	3	4.3	2.7	27.1	24.1
3	MB	COM UMB	F	6	N	20	28.5	16.3	163	145
3	MB	CRE SPP	F	6	N	4	5.7	3.3	32.9	29.3
3	MB	LUP ARG	F	6	N	12	15.8	9.2	91.9	81.8
3	MB	ORY HYM	G	6	N	2	2.7	1.6	15.7	14.0
3	MB	POA SPP	G	6	N	13	17.5	10.4	104	92.6
3	MB	AGR SPP	G	7	Y	7	5.5	4.1	41.0	36.5
3	MB	COM UMB	F	7	Y	13	17.5	6.6	66.0	58.7
3	MB	HET VIL	F	7	Y	2	4.0	2.3	23.0	20.5
3	MB	LIN LEW	F	7	Y	2	2.0	1.3	13.0	11.6
3	MB	ORY HYM	G	7	Y	1.5	1.5	1.2	12.0	10.7
3	MB	PHL LON	F	7	Y	1	0.5	0.5	5.0	4.4
3	MB	POA SPP	G	7	Y	6	8.5	5.1	51.0	45.4
3	MB	AGR SPP	G	8	N	9	12.9	8.1	81.3	72.3
3	MB	CHA DOU	F	8	N	1.5	2.1	1.3	13.3	11.8
3	MB	COM UMB	F	8	N	17	24.2	13.9	139	123
3	MB	ERI UMB	F	8	N	3	4.1	2.4	23.7	21.1
3	MB	IPO AGG	F	8	N	0.5	0.7	0.4	3.9	3.5
3	MB	LUP ARG	F	8	N	12	15.8	9.2	91.9	81.8
3	MB	ORY HYM	G	8	N	11	14.7	8.7	86.5	77.0
3	MB	PHL LON	F	8	N	0.5	0.7	0.4	4.0	3.5
3	MB	POA SPP	G	8	N	3	4.0	2.4	24.0	21.4
3	MB	STI SPP	G	8	N	1.5	2.0	1.2	11.9	10.6
3	MB	AGR SPP	G	9	N	4	5.8	3.6	36.1	32.2
3	MB	CHA DOU	F	9	N	1.5	2.1	1.3	13.3	11.8
3	MB	COM UMB	F	9	N	15	21.4	12.2	122	109

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
3	MB	CRE SPP	F	9	N	1.5	2.1	1.2	12.4	11.0
3	MB	IPO AGG	F	9	N	0.5	0.7	0.4	3.9	3.5
3	MB	LIN LEW	F	9	N	1	1.4	0.8	7.8	6.9
3	MB	MAC PAT	F	9	N	1	1.3	0.8	7.7	6.8
3	MB	POA SPP	G	9	N	5	6.7	4.0	40.0	35.6
3	MB	AGR SPP	G	10	Y	4	3.0	1.8	18.0	16.0
3	MB	CRE SPP	F	10	Y	0.5	0.5	0.5	5.0	4.4
3	MB	HET VIL	F	10	Y	1	0.5	0.5	5.0	4.4
3	MB	LUP ARG	F	10	Y	12	14.5	10.5	105	93.4
3	MB	POA SPP	G	10	Y	7	11.5	5.7	57.0	50.7
4	MB	AGR SPP	G	1	Y	3	2.5	1.5	15.0	13.3
4	MB	COM UMB	F	1	Y	20	41.5	13.3	133	118
4	MB	CRU SPP	F	1	Y	0.5	0.5	0.4	4.0	3.6
4	MB	ERI UMB	F	1	Y	3.5	5.5	3.3	33.0	29.4
4	MB	HET VIL	F	1	Y	1	1.0	0.7	7.0	6.2
4	MB	LIT RUD	F	1	Y	6	5.0	2.8	28.0	24.9
4	MB	LUP ARG	F	1	Y	30	18.5	13.5	135	120
4	MB	ORY HYM	G	1	Y	5	13.0	8.1	81.0	72.1
4	MB	POA SPP	G	1	Y	3	4.0	2.2	22.0	19.6
4	MB	AGR SPP	G	2	N	2	2.9	1.8	18.1	16.1
4	MB	BAL SAG	F	2	N	14	19.8	12.4	124	111
4	MB	COM UMB	F	2	N	3	4.3	2.4	24.5	21.8
4	MB	CRE SPP	F	2	N	1	1.4	0.8	8.2	7.3
4	MB	ERI UMB	F	2	N	3.5	4.8	2.8	27.7	24.6
4	MB	HET VIL	F	2	N	1	1.4	0.8	7.8	6.9
4	MB	ORY HYM	G	2	N	2	2.7	1.6	15.7	14.0
4	MB	PEN CAE	F	2	N	3	4.0	2.4	23.7	21.1
4	MB	PHL LON	F	2	N	0.5	0.7	0.4	4.0	3.5
4	MB	POA SPP	G	2	N	7	9.4	5.6	56.0	49.8
4	MB	AGR SPP	G	3	N	12	17.3	10.8	108	96.5
4	MB	ERI UMB	F	3	N	1.5	2.0	1.2	11.9	10.6
4	MB	PEN CAE	F	3	N	2.5	3.3	2.0	19.7	17.6
4	MB	POA SPP	G	3	N	2	2.7	1.6	16.0	14.2
4	MB	AGR SPP	G	4	N	8	11.5	7.2	72.2	64.3
4	MB	HAP NUT	F	4	N	7	9.5	5.5	55.2	49.1
4	MB	HYM ACA	F	4	N	0.5	0.7	0.4	3.9	3.5
4	MB	PEN CAE	F	4	N	1.5	2.0	1.2	11.8	10.5
4	MB	POA SPP	G	4	N	1.5	2.0	1.2	12.0	10.7
4	MB	AGR SPP	G	5	N	8	11.5	7.2	72.2	64.3
4	MB	AST SPP	F	5	N	0.5	0.7	0.4	4.4	3.9
4	MB	ERI LON	F	5	N	3	4.1	2.3	23.5	20.9
4	MB	HAP NUT	F	5	N	4.5	6.1	3.5	35.5	31.6
4	MB	HET VIL	F	5	N	2.5	3.4	1.9	19.5	17.3
4	MB	HYM ACA	F	5	N	1	1.4	0.8	7.8	6.9
4	MB	LUP ARG	F	5	N	30	39.5	23.0	230	204
4	MB	PEN CAE	F	5	N	1.5	2.0	1.2	11.8	10.5
4	MB	POA SPP	G	5	N	9	12.1	7.2	72.0	64.1
4	MB	AGR SPP	G	6	Y	4	4.5	3.6	36.0	32.0
4	MB	AST DIV	F	6	Y	2.5	1.0	0.8	8.0	7.1
4	MB	CRU SPP	F	6	Y	0.5	0.5	0.5	5.0	4.4

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
4	MB	ERI UMB	F	6	Y	2.5	3.5	2.5	25.0	22.2
4	MB	HAP NUT	F	6	Y	4.5	6.0	3.4	34.0	30.3
4	MB	LUP ARG	F	6	Y	30	24.5	17.9	179	159
4	MB	ORY HYM	G	6	Y	5	6.5	4.3	43.0	38.3
4	MB	POA SPP	G	6	Y	3	1.5	1.3	13.0	11.6
4	MB	UNK COM	F	6	Y	0.5	0.5	0.8	8.0	7.1
4	MB	AST SPP	F	7	Y	0.5	0.5	0.5	5.0	4.4
4	MB	BRO TEC	G	7	Y	0.5	0.0	0.2	2.0	1.8
4	MB	CHA DOU	F	7	Y	0.5	0.5	0.4	4.0	3.6
4	MB	PHL LON	F	7	Y	0.5	0.0	0.2	2.0	1.8
4	MB	POA SPP	G	7	Y	7	4.5	3.2	32.0	28.5
4	MB	SIT HYS	G	7	Y	8	4.0	3.0	30.0	26.7
4	MB	SPH COC	F	7	Y	1.5	2.0	1.2	12.0	10.7
4	MB	AGR SPP	G	8	N	10	14.4	9.0	90.3	80.4
4	MB	AST SPP	F	8	N	1	1.4	0.9	8.9	7.9
4	MB	CHA DOU	F	8	N	0.1	0.1	0.1	0.9	0.8
4	MB	ERI LON	F	8	N	5	6.8	3.9	39.1	34.8
4	MB	HYM ACA	F	8	N	1.5	2.0	1.2	11.7	10.4
4	MB	ORY HYM	G	8	N	0.5	0.7	0.4	3.9	3.5
4	MB	PEN CAE	F	8	N	0.5	0.7	0.4	3.9	3.5
4	MB	POA SPP	G	8	N	1	1.3	0.8	8.0	7.1
4	MB	AGR SPP	G	9	Y	8	12.0	7.0	70.0	62.3
4	MB	ERI LON	F	9	Y	4	7.0	3.5	35.0	31.1
4	MB	HAP NUT	F	9	Y	4.5	5.0	2.6	26.0	23.1
4	MB	HYM ACA	F	9	Y	3	4.0	1.4	14.0	12.5
4	MB	PEN CAE	F	9	Y	0.5	0.5	0.4	4.0	3.6
4	MB	AGR SPP	G	10	Y	3.5	3.0	2.0	20.0	17.8
4	MB	ORY HYM	G	10	Y	14	12.0	7.2	72.0	64.1
5	PJ	CAR SPP	G	1	Y	0.5	0.5	0.6	6.0	5.3
5	PJ	PHL LON	F	1	Y	0.1	0.0	0.3	3.0	2.7
5	PJ	POA SPP	G	1	Y	3	4.5	2.4	24.0	21.4
5	PJ	SIT HYS	G	1	Y	1.5	1.5	0.8	8.0	7.1
5	PJ	AST SPP	F	2	Y	0.5	0.5	0.4	4.0	3.6
5	PJ	ORY HYM	G	2	Y	4	4.0	2.6	26.0	23.1
5	PJ	PHL LON	F	2	Y	0.5	0.5	0.5	5.0	4.4
5	PJ	SIT HYS	G	2	Y	4	4.0	2.4	24.0	21.4
5	PJ	AGR SPP	G	4	N	2	2.7	1.6	15.8	14.1
5	PJ	CAR SPP	G	4	N	0.5	0.7	0.4	4.0	3.6
5	PJ	POA SPP	G	4	N	3.5	4.6	2.8	28.1	25.0
5	PJ	UNK FOR	F	4	N	0.5	0.7	0.4	4.0	3.6
5	PJ	CRY SER	F	5	N	3.5	4.7	2.8	28.4	25.3
5	PJ	ERI UMB	F	5	N	2	2.7	1.6	16.2	14.4
5	PJ	CRY SER	F	6	N	1.5	2.0	1.2	12.2	10.8
5	PJ	POA SPP	G	6	N	4	5.3	3.2	32.1	28.6
5	PJ	AST SPP	F	7	Y	0.5	0.5	0.5	5.0	4.4
5	PJ	CRY SER	F	7	Y	0.5	0.5	0.5	5.0	4.4
5	PJ	POA SPP	G	7	Y	10	7.5	4.0	40.0	35.6
5	PJ	AGR SPP	G	8	N	3	4.0	2.4	23.7	21.1
5	PJ	HAP NUT	F	8	N	1	1.3	0.8	8.1	7.2
5	PJ	POA SPP	G	8	N	0.5	0.7	0.4	4.0	3.6

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
5	PJ	AGR SPP	G	9	N	5.5	7.3	4.3	43.4	38.6
5	PJ	AST SPP	F	9	N	1	1.3	0.8	7.9	7.0
5	PJ	CRY SER	F	9	N	1	1.3	0.8	8.1	7.2
5	PJ	BAL SAG	F	9	N	8	10.5	6.4	64.2	57.2
5	PJ	STI SPP	G	9	N	2.5	3.3	2.0	20.0	17.8
5	PJ	AGR SPP	G	10	Y	4	2.0	1.7	17.0	15.1
6	PJ	ERI LON	F	1	Y	5	4.5	2.1	21.0	18.7
6	PJ	HAP NUT	F	1	Y	12	22.5	12.3	123	109
6	PJ	ORY HYM	G	1	Y	5	5.0	3.2	32.0	28.5
6	PJ	PHY FLO	F	1	Y	0.5	1.0	0.5	5.0	4.4
6	PJ	AGR SPP	G	2	N	1	1.3	0.8	7.9	7.0
6	PJ	HAP NUT	F	2	N	3	4.0	2.4	24.4	21.7
6	PJ	PHY FLO	F	2	N	0.5	0.7	0.4	4.1	3.6
6	PJ	BRO TEC	G	3	Y	0.5	0.5	0.4	4.0	3.6
6	PJ	PHY FLO	F	3	Y	1	1.5	0.6	6.0	5.3
6	PJ	SIT HYS	G	3	Y	23	24.5	13.2	132	117
6	PJ	HAP NUT	F	5	Y	2.5	3.0	1.9	19.0	16.9
6	PJ	ERI LON	F	6	N	10	13.3	8.1	81.0	72.1
6	PJ	HAP NUT	F	6	N	8	10.7	6.5	65.0	57.8
6	PJ	ERI LON	F	7	N	15	19.9	12.1	121	108
6	PJ	HAP NUT	F	7	N	20	26.6	16.2	162	145
6	PJ	ERI LON	F	8	N	1.5	2.0	1.2	12.1	10.8
6	PJ	HAP NUT	F	9	N	1	1.3	0.8	8.1	7.2
6	PJ	ERI LON	F	10	Y	9	1.3	6.6	66.0	58.7
7	PJ	BRO TEC	G	1	Y	0.5	0.5	0.4	4.0	3.6
7	PJ	POA SPP	G	1	Y	1.5	1.5	0.7	7.0	6.2
7	PJ	SIT HYS	G	1	Y	4	3.5	2.0	20.0	17.8
7	PJ	ORY HYM	G	2	Y	4	10.0	5.6	56.0	49.8
7	PJ	AGR SPP	G	3	N	1	1.3	0.8	7.9	7.0
7	PJ	BRO TEC	G	3	N	1	1.3	0.8	8.1	7.2
7	PJ	ORY HYM	G	3	N	4	5.3	3.2	32.5	28.9
7	PJ	POA SPP	G	3	N	5	6.6	4.0	40.1	35.7
7	PJ	SIT HYS	G	3	N	2	2.6	1.6	16.0	14.2
7	PJ	AGR SPP	G	4	Y	11	13.0	6.6	66.0	58.7
7	PJ	BRO TEC	G	4	Y	0.5	0.5	0.5	5.0	4.4
7	PJ	ORY HYM	G	4	Y	6	7.5	3.8	38.0	33.8
7	PJ	POA SPP	G	4	Y	2.5	2.5	1.3	13.0	11.6
7	PJ	SIT HYS	G	4	Y	1.5	1.5	0.8	8.0	7.1
7	PJ	AGR SPP	G	6	N	0.5	0.7	0.4	3.9	3.5
7	PJ	ORY HYM	G	6	N	3.5	4.6	2.8	28.4	25.3
7	PJ	AGR SPP	G	7	N	6	8.0	4.7	47.4	42.2
7	PJ	AGR SPP	G	8	N	4	5.3	3.2	31.6	28.1
7	PJ	ORY HYM	G	8	N	3	4.0	2.4	24.3	21.7
7	PJ	AGR SPP	G	9	N	6	8.0	4.7	47.4	42.2
7	PJ	ORY HYM	G	9	N	5	6.6	4.1	40.6	36.1
7	PJ	UNK FOR	F	9	N	0.5	0.7	0.4	4.0	3.6
7	PJ	PHY FLO	F	10	Y	0.5	0.5	0.3	3.0	2.7
7	PJ	POA SPP	G	10	Y	2.5	2.0	0.9	9.0	8.0
7	PJ	UNK FOR	F	10	Y	0.5	0.5	0.3	3.0	2.7
8	SB	AGR SPP	G	1	Y	3	2.5	1.1	11.0	9.8

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
8	SB	CRE SPP	F	1	Y	1	3.0	2.9	29.0	25.8
8	SB	HET VIL	F	1	Y	1	0.5	0.3	3.0	2.7
8	SB	KOE CRI	G	1	Y	1.5	1.5	1.0	10.0	8.9
8	SB	PHL LON	F	1	Y	0.5	0.5	0.3	3.0	2.7
8	SB	POA SPP	G	1	Y	5	8.0	4.5	45.0	40.0
8	SB	SPH COC	F	1	Y	1	1.5	1.0	10.0	8.9
8	SB	UNK FOR	F	1	Y	0.5	0.5	0.3	3.0	2.7
8	SB	AGR SPP	G	2	N	1	1.3	0.8	8.1	7.2
8	SB	CAR SPP	G	2	N	3	4.0	2.4	24.5	21.8
8	SB	HET VIL	F	2	N	1	1.3	0.8	8.0	7.2
8	SB	PHL LON	F	2	N	0.5	0.7	0.4	4.0	3.6
8	SB	POA SPP	G	2	N	10	13.2	8.1	80.6	71.7
8	SB	AGR SPP	G	3	N	3	4.0	2.4	24.3	21.6
8	SB	CAR SPP	G	3	N	2	2.7	1.6	16.3	14.5
8	SB	CRE SPP	F	3	N	3	4.0	2.4	24.4	21.7
8	SB	HET VIL	F	3	N	1	1.3	0.8	8.0	7.2
8	SB	PHL LON	F	3	N	0.5	0.7	0.4	4.0	3.6
8	SB	POA SPP	G	3	N	5	6.6	4.0	40.3	35.9
8	SB	AGR SPP	G	4	Y	6	4.0	2.4	24.0	21.4
8	SB	AST DIV	F	4	Y	2.5	2.5	1.2	12.0	10.7
8	SB	CRE SPP	F	4	Y	2	1.5	1.0	10.0	8.9
8	SB	CRY SER	F	4	Y	1.5	1.0	0.8	8.0	7.1
8	SB	KOE CRI	G	4	Y	3	1.5	1.0	10.0	8.9
8	SB	PHL LON	F	4	Y	1	0.5	0.9	9.0	8.0
8	SB	POA SPP	G	4	Y	16	18.0	9.6	96.0	85.4
8	SB	SPH COC	F	4	Y	10	13.5	6.1	61.0	54.3
8	SB	AGR SPP	G	5	N	2	2.7	1.6	16.2	14.4
8	SB	CRE SPP	F	5	N	3	4.0	2.4	24.4	21.7
8	SB	HET VIL	F	5	N	0.5	0.7	0.4	4.0	3.6
8	SB	PHL LON	F	5	N	0.5	0.7	0.4	4.0	3.6
8	SB	POA SPP	G	5	N	12	15.9	9.7	96.7	86.1
8	SB	AGR SPP	G	6	Y	1.5	2.0	1.0	10.0	8.9
8	SB	ANT SPP	F	6	Y	0.5	1.0	0.8	8.0	7.1
8	SB	CAR SPP	G	6	Y	0.5	0.5	0.5	5.0	4.4
8	SB	CRE SPP	F	6	Y	4	5.5	5.1	51.0	45.4
8	SB	HET VIL	F	6	Y	1	1.5	1.0	10.0	8.9
8	SB	PHL LON	F	6	Y	0.5	1.0	0.8	8.0	7.1
8	SB	POA SPP	G	6	Y	15	19.5	11.3	113	101
8	SB	SPH COC	F	6	Y	1	1.0	0.7	7.0	6.2
8	SB	AGR SPP	G	7	N	2.5	3.4	2.0	20.2	18.0
8	SB	CHA DOU	F	7	N	0.5	0.7	0.4	4.1	3.6
8	SB	CRU SPP	F	7	N	0.5	0.7	0.4	4.1	3.6
8	SB	CRY SER	F	7	N	1	1.3	0.8	8.1	7.2
8	SB	ERI UMB	F	7	N	3	4.0	2.4	24.4	21.7
8	SB	HET VIL	F	7	N	1	1.3	0.8	8.0	7.2
8	SB	IPO AGG	F	7	N	0.5	0.7	0.4	4.0	3.6
8	SB	KOE CRI	G	7	N	1.5	2.0	1.2	12.1	10.7
8	SB	PHL LON	F	7	N	0.5	0.7	0.4	4.0	3.6
8	SB	POA SPP	G	7	N	4.5	6.0	3.6	36.3	32.3
8	SB	SPH COC	F	7	N	4	5.3	3.2	32.2	28.7

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
8	SB	STI SPP	G	7	N	2	2.6	1.6	16.1	14.3
8	SB	AGR SPP	G	8	N	2	2.7	1.6	16.2	14.4
8	SB	ANT SPP	F	8	N	14	18.8	11.3	113	101
8	SB	IPO AGG	F	8	N	0.5	0.7	0.4	4.0	3.6
8	SB	PHL LON	F	8	N	0.5	0.7	0.4	4.0	3.6
8	SB	POA SPP	G	8	N	8	10.6	6.4	64.5	57.4
8	SB	SPH COC	F	8	N	5	6.6	4.0	40.2	35.8
8	SB	AGR SPP	G	9	Y	1	0.5	0.5	5.0	4.4
8	SB	ANT SPP	F	9	Y	4	4.0	2.1	21.0	18.7
8	SB	CAR SPP	G	9	Y	2	1.0	0.9	9.0	8.0
8	SB	CRE SPP	F	9	Y	2	2.0	2.0	20.0	17.8
8	SB	HET VIL	F	9	Y	10	8.0	4.7	47.0	41.8
8	SB	ORY HYM	G	9	Y	3	5.0	3.1	31.0	27.6
8	SB	PHL LON	F	9	Y	1	0.5	0.8	8.0	7.1
8	SB	POA SPP	G	9	Y	15	20.0	10.7	107	95.2
8	SB	SPH COC	F	9	Y	3	5.0	2.8	28.0	24.9
8	SB	HET VIL	F	10	Y	0.5	0.5	0.5	5.0	4.4
8	SB	ORY HYM	G	10	Y	1.5	1.5	1.0	10.0	8.9
8	SB	PHL LON	F	10	Y	0.5	0.5	0.7	7.0	6.2
8	SB	POA SPP	G	10	Y	4.5	9.0	4.2	42.0	37.4
8	SB	SPH COC	F	10	Y	3	5.5	2.9	29.0	25.8
10	SB	CRY SER	F	1	Y	7	12.0	8.2	82.0	73.0
10	SB	AGR SPP	G	2	Y	6	5.5	3.3	33.0	29.4
10	SB	CRU SPP	F	2	Y	6	7.5	4.0	40.0	35.6
10	SB	ORY HYM	G	2	Y	9	16.5	9.1	91.0	81.0
10	SB	BRO TEC	G	3	N	0.5	0.7	0.4	4.1	3.6
10	SB	CRY SER	F	3	N	3	4.0	2.4	24.4	21.7
10	SB	POA SPP	G	3	N	0.5	0.7	0.4	4.0	3.6
10	SB	AGR SPP	G	4	N	4	5.4	3.2	32.3	28.8
10	SB	CRY SER	F	4	N	2	2.7	1.6	16.2	14.5
10	SB	HET VIL	F	4	N	1	1.3	0.8	8.0	7.2
10	SB	PEN CAE	F	4	N	0.5	0.7	0.4	4.0	3.6
10	SB	POA SPP	G	4	N	3	4.0	2.4	24.2	21.5
10	SB	SPH COC	F	4	N	0.5	0.7	0.4	4.0	3.6
10	SB	AGR SPP	G	5	N	3	4.0	2.4	24.3	21.6
10	SB	AGR SPP	G	6	N	14	18.8	11.3	113	101
10	SB	POA SPP	G	6	N	6	7.9	4.8	48.4	43.0
10	SB	AGR SPP	G	7	Y	6	4.5	3.1	31.0	27.6
10	SB	CRY SER	F	7	Y	1	1.5	1.1	11.0	9.8
10	SB	ORY HYM	G	7	Y	0.5	0.5	0.5	5.0	4.4
10	SB	POA SPP	G	7	Y	1	1.5	1.1	11.0	9.8
10	SB	AGR SPP	G	8	Y	20	29.0	17.6	176	157
10	SB	AST DIV	F	8	Y	1.5	1.0	1.1	11.0	9.8
10	SB	POA SPP	G	8	Y	4.5	3.0	2.1	21.0	18.7
10	SB	AGR SPP	G	9	N	2	2.7	1.6	16.2	14.4
10	SB	PHY FLO	F	9	N	1.5	2.0	1.2	12.1	10.8
10	SB	SPH COC	F	9	N	0.5	0.7	0.4	4.0	3.6
10	SB	AGR SPP	G	10	Y	8	9.0	5.8	58.0	51.6
10	SB	ORY HYM	G	10	Y	1.5	3.5	1.9	19.0	16.9
11	PJ	AGR SPP	G	1	Y	3	8.0	4.5	45.0	40.0

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
11	PJ	AST SPP	F	1	Y	1	1.5	0.9	9.0	8.0
11	PJ	CAR SPP	G	1	Y	0.5	1.0	0.9	9.0	8.0
11	PJ	ORY HYM	G	1	Y	1	2.0	1.5	15.0	13.3
11	PJ	AST SPP	F	2	N	1	1.3	0.8	7.9	7.0
11	PJ	CAR SPP	G	2	N	1	1.3	0.8	8.1	7.2
11	PJ	PHY FLO	F	2	N	1	1.3	0.8	8.1	7.2
11	PJ	CAR SPP	G	3	N	2	2.7	1.6	16.1	14.3
11	PJ	PHY FLO	F	3	N	0.5	0.7	0.4	4.1	3.6
11	PJ	POA SPP	G	3	N	1	1.3	0.8	8.0	7.1
11	PJ	SIT HYS	G	3	N	1	1.3	0.8	8.0	7.1
11	PJ	SEN MUL	F	4	Y	2	1.5	0.9	9.0	8.0
11	PJ	ORY HYM	G	5	N	2.5	3.3	2.0	20.3	18.1
11	PJ	AGR SPP	G	6	Y	2	3.5	2.1	21.0	18.7
11	PJ	CAR SPP	G	6	Y	1.5	2.0	1.5	15.0	13.3
11	PJ	HAP NUT	F	6	Y	4	7.0	3.9	39.0	34.7
11	PJ	ORY HYM	G	6	Y	0.5	0.5	0.6	6.0	5.3
11	PJ	PHY FLO	F	6	Y	0.5	0.5	0.6	6.0	5.3
11	PJ	CRU SPP	F	7	N	0.5	0.7	0.4	4.0	3.6
11	PJ	PHY FLO	F	8	N	0.5	0.7	0.4	4.1	3.6
11	PJ	SAL KAL	F	8	N	1.5	2.0	1.2	12.0	10.7
11	PJ	PEN CAE	F	9	Y	0.5	1.0	0.8	8.0	7.1
11	PJ	POA SPP	G	10	Y	1	1.5	1.0	10.0	8.9
11	PJ	SIT HYS	G	10	Y	2	2.0	1.0	10.0	8.9
12	PJ	AGR SPP	G	1	Y	0.5	0.5	0.4	4.0	3.6
12	PJ	PHY FLO	F	1	Y	2	3.0	1.0	10.0	8.9
12	PJ	POA SPP	G	1	Y	0.5	0.5	0.4	4.0	3.6
12	PJ	SEN MUL	F	1	Y	2.5	4.0	1.4	14.0	12.5
12	PJ	ANT SPP	F	2	N	0.5	0.7	0.4	3.9	3.5
12	PJ	IPO AGG	F	2	N	0.5	0.7	0.4	4.1	3.6
12	PJ	ORY HYM	G	2	N	1.5	2.0	1.2	12.2	10.8
12	PJ	POA SPP	G	2	N	6	7.9	4.8	48.2	42.9
12	PJ	SIT HYS	G	2	N	4	5.2	3.2	31.9	28.4
12	PJ	UNK COM	F	2	N	1	1.3	0.8	8.0	7.1
12	PJ	AGR SPP	G	3	N	2	2.7	1.6	15.8	14.1
12	PJ	BOR SPP	F	3	N	0.5	0.7	0.4	4.0	3.6
12	PJ	PHY FLO	F	3	N	2	2.7	1.6	16.2	14.5
12	PJ	POA SPP	G	3	N	6	7.9	4.8	48.2	42.9
12	PJ	AGR SPP	G	4	Y	3	3.0	1.4	14.0	12.5
12	PJ	BOR SPP	F	4	Y	2	1.5	1.2	12.0	10.7
12	PJ	CHE ALB	F	4	Y	0.5	0.5	0.3	3.0	2.7
12	PJ	CRY SER	F	4	Y	1.5	2.5	1.2	12.0	10.7
12	PJ	MAC PAT	F	4	Y	2	1.5	0.7	7.0	6.2
12	PJ	ORY HYM	G	4	Y	7	9.0	5.2	52.0	46.3
12	PJ	SIT HYS	G	4	Y	2	1.5	0.4	4.0	3.6
12	PJ	CAR SPP	G	5	N	1	1.3	0.8	8.1	7.2
12	PJ	CRY SER	F	5	N	1.5	2.0	1.2	12.2	10.8
12	PJ	POA SPP	G	5	N	1.5	2.0	1.2	12.0	10.7
12	PJ	AGR SPP	G	6	Y	7	9.5	4.9	49.0	43.6
12	PJ	AST SPP	F	6	Y	1	2.0	0.7	7.0	6.2
12	PJ	CRU SPP	F	6	Y	1	1.0	0.8	8.0	7.1

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
12	PJ	CAR SPP	G	7	Y	1.5	1.5	0.5	5.0	4.4
12	PJ	PEN CAE	F	7	Y	1.5	2.0	0.4	4.0	3.6
12	PJ	POA SPP	G	7	Y	9	10.5	4.7	47.0	41.8
12	PJ	POA SPP	G	8	N	2	2.6	1.6	16.1	14.3
12	PJ	UNK FOR	F	8	N	1	1.3	0.8	8.0	7.1
12	PJ	HET VIL	F	9	N	0.5	0.7	0.4	4.1	3.6
12	PJ	POA SPP	G	9	N	6.5	8.6	5.2	52.2	46.4
12	PJ	CAR SPP	G	10	Y	5	5.5	2.8	28.0	24.9
12	PJ	ORY HYM	G	10	Y	3	3.0	1.9	19.0	16.9
12	PJ	POA SPP	G	10	Y	1.5	1.0	0.8	8.0	7.1
12	PJ	UNK FOR	F	10	Y	1	2.0	1.0	10.0	8.9
14	SB	BRO TEC	G	1	Y	0.5	1.5	1.5	15.0	13.3
14	SB	ORY HYM	G	1	Y	4	5.5	3.5	35.0	31.1
14	SB	SIT HYS	G	1	Y	4	5.0	4.4	44.0	39.2
14	SB	UNK FOR	F	1	Y	1	1.5	0.7	7.0	6.2
14	SB	BRO TEC	G	3	Y	10.5	13.0	11.6	116	103
14	SB	ORY HYM	G	3	Y	7.5	6.0	3.6	36.0	32.0
14	SB	SIT HYS	G	3	Y	1.5	4.5	3.0	30.0	26.7
14	SB	BRO TEC	G	4	N	9	12.0	7.3	73.5	65.4
14	SB	SIT HYS	G	4	N	2	2.6	1.6	16.1	14.3
14	SB	AGR SPP	G	5	N	7	9.4	5.7	56.6	50.4
14	SB	BRO TEC	G	5	N	2.5	3.3	2.0	20.4	18.2
14	SB	SIT HYS	G	5	N	1.5	2.0	1.2	12.1	10.7
14	SB	BRO TEC	G	6	Y	0.5	0.5	0.8	8.0	7.1
14	SB	ORY HYM	G	6	Y	10	18.5	11.4	114	101
14	SB	SIT HYS	G	6	Y	2	2.5	2.2	22.0	19.6
14	SB	UNK COM	F	6	Y	0.5	2.0	0.7	7.0	6.2
14	SB	AGR SPP	G	7	N	3	4.0	2.4	24.3	21.6
14	SB	BRO TEC	G	7	N	0.5	0.7	0.4	4.1	3.6
14	SB	SIT HYS	G	7	N	4	5.3	3.2	32.2	28.6
14	SB	AGR SPP	G	8	Y	15	31.5	19.3	193	172
14	SB	BRO TEC	G	8	Y	2.5	3.0	3.0	30.0	26.7
14	SB	SIT HYS	G	8	Y	2.5	2.5	2.1	21.0	18.7
14	SB	AGR SPP	G	9	N	15	20.1	12.1	121	108
14	SB	BRO TEC	G	9	N	3	4.0	2.4	24.5	21.8
14	SB	ORY HYM	G	9	N	3	4.0	2.4	24.2	21.5
14	SB	SIT HYS	G	9	N	2	2.6	1.6	16.1	14.3
14	SB	AGR SPP	G	10	Y	20	25.5	14.9	149	133
14	SB	BRO TEC	G	10	Y	2.5	4.0	4.0	40.0	35.6
14	SB	SIT HYS	G	10	Y	3	2.0	2.1	21.0	18.7
15	SB	AGR SPP	G	1	Y	25	47.0	25.2	252	224
15	SB	BRO TEC	G	1	Y	4	4.5	4.2	42.0	37.4
15	SB	AGR SPP	G	2	N	6	8.0	4.9	48.5	43.2
15	SB	BRO TEC	G	2	N	1.5	2.0	1.2	12.2	10.9
15	SB	CRU SPP	F	2	N	4	5.4	3.2	32.5	28.9
15	SB	SIT HYS	G	2	N	1	1.3	0.8	8.0	7.2
15	SB	AGR SPP	G	3	N	12	16.1	9.7	97.0	86.3
15	SB	BRO TEC	G	3	N	0.5	0.7	0.4	4.1	3.6
15	SB	ORY HYM	G	3	N	0.5	0.7	0.4	4.0	3.6
15	SB	STI SPP	G	3	N	0.5	0.7	0.4	4.0	3.6

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
15	SB	AGR SPP	G	4	Y	40	74.0	39.8	398	354
15	SB	BRO TEC	G	4	Y	10	11.5	10.9	109	97.0
15	SB	ORY HYM	G	4	Y	2	4.5	2.5	25.0	22.2
15	SB	SIT HYS	G	4	Y	3	5.0	3.6	36.0	32.0
15	SB	BRO TEC	G	5	N	12	16.0	9.8	98.0	87.2
15	SB	ORY HYM	G	5	N	8	10.6	6.4	64.5	57.4
15	SB	SIT HYS	G	5	N	8	10.6	6.4	64.3	57.2
15	SB	ORY HYM	G	6	Y	24	29.0	16.5	165	147
15	SB	AGR SPP	G	7	N	9	12.1	7.3	72.8	64.8
15	SB	BRO TEC	G	7	N	1	1.3	0.8	8.2	7.3
15	SB	ORY HYM	G	7	N	0.5	0.7	0.4	4.0	3.6
15	SB	SIT HYS	G	7	N	0.5	0.7	0.4	4.0	3.6
15	SB	AGR SPP	G	8	N	6	8.0	4.9	48.5	43.2
15	SB	SIT HYS	G	8	N	24	31.7	19.3	193	172
15	SB	AGR SPP	G	9	Y	30	54.0	31.3	313	279
15	SB	AST SPP	F	9	Y	1	1.5	1.0	10.0	8.9
15	SB	BRO TEC	G	9	Y	4	3.0	3.5	35.0	31.1
15	SB	ORY HYM	G	9	Y	4.5	2.5	2.0	20.0	17.8
15	SB	AGR SPP	G	10	Y	50	64.0	37.1	371	330
15	SB	AST SPP	F	10	Y	1	0.5	0.5	5.0	4.4
15	SB	BRO TEC	G	10	Y	1.5	0.5	0.8	8.0	7.1
16	PJ	POA SPP	G	1	Y	6.5	10.0	4.4	44.0	39.2
16	PJ	SIT HYS	G	1	Y	1	1.0	0.5	5.0	4.4
16	PJ	AGR SPP	G	2	Y	1	0.5	0.5	5.0	4.4
16	PJ	CAR SPP	G	2	Y	1	1.0	0.8	8.0	7.1
16	PJ	POA SPP	G	2	Y	1.5	2.0	1.4	14.0	12.5
16	PJ	AGR SPP	G	3	N	3	4.0	2.4	23.7	21.1
16	PJ	CRY SER	F	3	N	2.5	3.3	2.0	20.3	18.0
16	PJ	HET VIL	F	3	N	1	1.3	0.8	8.1	7.2
16	PJ	POA SPP	G	3	N	4	5.3	3.2	32.1	28.6
16	PJ	AGR SPP	G	4	Y	5	4.5	2.4	24.0	21.4
16	PJ	CAR SPP	G	4	Y	2	2.5	1.4	14.0	12.5
16	PJ	CRY SER	F	4	Y	1	1.5	0.9	9.0	8.0
16	PJ	HET VIL	F	4	Y	1	2.0	1.1	11.0	9.8
16	PJ	ORY HYM	G	4	Y	0.5	0.5	0.4	4.0	3.6
16	PJ	POA SPP	G	4	Y	5	6.0	3.0	30.0	26.7
16	PJ	UNK FOR	F	4	Y	3	5.0	2.2	22.0	19.6
16	PJ	AGR SPP	G	5	N	4	5.3	3.2	31.6	28.1
16	PJ	POA SPP	G	5	N	3.5	4.6	2.8	28.1	25.0
16	PJ	UNK CRU	F	5	N	0.1	0.1	0.1	0.8	0.7
16	PJ	UNK FOR	F	5	N	0.5	0.7	0.4	4.0	3.6
16	PJ	AGR SPP	G	6	N	7	9.4	5.5	55.3	49.2
16	PJ	AST SPP	F	6	N	0.5	0.7	0.4	3.9	3.5
16	PJ	SEN MUL	F	6	N	0.5	0.7	0.4	4.0	3.6
16	PJ	POA SPP	G	8	N	7.5	9.9	6.0	60.2	53.6
16	PJ	SEN MUL	F	8	N	0.5	0.7	0.4	4.0	3.6
16	PJ	UNK FOR	F	8	N	0.5	0.7	0.4	4.0	3.6
16	PJ	CAR SPP	G	9	Y	0.5	1.0	0.8	8.0	7.1
16	PJ	HET VIL	F	9	Y	5	4.5	2.6	26.0	23.1
16	PJ	POA SPP	G	9	Y	1.5	1.5	1.3	13.0	11.6

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
16	PJ	SEN MUL	F	9	Y	1	1.0	0.7	7.0	6.2
16	PJ	UNK FOR	F	9	Y	0.1	0.0	1.0	10.0	8.9
16	PJ	UNK SPP	F	9	Y	0.5	0.0	0.6	6.0	5.3
16	PJ	AGR SPP	G	10	Y	1.5	3.5	2.0	20.0	17.8
16	PJ	CRY SER	F	10	Y	0.5	0.5	0.9	9.0	8.0
16	PJ	HET VIL	F	10	Y	3	4.0	2.1	21.0	18.7
16	PJ	UNK FOR	F	10	Y	4	6.0	2.8	28.0	24.9
17	PJ	AGR SPP	G	1	Y	1	0.5	0.4	4.0	3.6
17	PJ	ARE FEN	F	1	Y	1	1.0	1.0	10.0	8.9
17	PJ	POA SPP	G	1	Y	9	14.5	7.2	72.0	64.1
17	PJ	SEN MUL	F	1	Y	0.5	0.5	0.4	4.0	3.6
17	PJ	UNK COM	F	1	Y	0.5	0.5	0.4	4.0	3.6
17	PJ	AGR SPP	G	2	N	2	2.7	1.6	15.8	14.1
17	PJ	POA SPP	G	2	N	4	5.3	3.2	32.1	28.6
17	PJ	UNK COM	F	2	N	0.5	0.7	0.4	4.0	3.6
17	PJ	HAP NUT	F	3	N	4	5.3	3.2	32.5	28.9
17	PJ	ORY HYM	G	3	N	2	2.7	1.6	16.2	14.4
17	PJ	POA SPP	G	3	N	1	1.3	0.8	8.0	7.1
17	PJ	BOR SPP	F	4	N	0.5	0.7	0.4	4.0	3.6
17	PJ	HAP NUT	F	4	N	0.5	0.7	0.4	4.1	3.6
17	PJ	PEN CAE	F	4	N	0.5	0.7	0.4	4.1	3.6
17	PJ	POA SPP	G	4	N	18	23.7	14.5	145	129
17	PJ	SEN MUL	F	4	N	0.5	0.7	0.4	4.0	3.6
17	PJ	AGR SPP	G	5	N	3.5	4.7	2.8	27.6	24.6
17	PJ	ARE FEN	F	5	N	0.5	0.7	0.4	3.9	3.5
17	PJ	CRY SER	F	5	N	0.5	0.7	0.4	4.1	3.6
17	PJ	HAP NUT	F	5	N	3	4.0	2.4	24.4	21.7
17	PJ	PEN CAE	F	5	N	0.5	0.7	0.4	4.1	3.6
17	PJ	POA SPP	G	5	N	16	21.0	12.8	128	114
17	PJ	AGR SPP	G	6	Y	1.5	2.0	1.1	11.0	9.8
17	PJ	ARE FEN	F	6	Y	0.1	0.0	0.3	3.0	2.7
17	PJ	HAP NUT	F	6	Y	6	12.0	6.8	68.0	60.5
17	PJ	ORY HYM	G	6	Y	10	11.0	6.5	65.0	57.8
17	PJ	POA SPP	G	7	N	3.5	4.6	2.8	28.1	25.0
17	PJ	POA SPP	G	8	Y	17	21.0	11.0	110	97.9
17	PJ	BOR SPP	F	9	Y	1	1.0	1.1	11.0	9.8
17	PJ	POA SPP	G	9	Y	13	13.0	6.4	64.0	57.0
17	PJ	AGR SPP	G	10	Y	2.5	2.0	1.3	13.0	11.6
17	PJ	CHE SPP	F	10	Y	0.5	0.5	0.4	4.0	3.6
17	PJ	CRY SER	F	10	Y	0.5	1.5	1.0	10.0	8.9
17	PJ	POA SPP	G	10	Y	4	4.0	2.2	22.0	19.6
17	PJ	UNK COM	F	10	Y	0.5	1.0	0.4	4.0	3.6
19	PJ	AGR SPP	G	1	Y	6	6.5	5.7	57.0	50.7
19	PJ	COM UMB	F	1	Y	1	1.0	2.6	26.0	23.1
19	PJ	CRY SER	F	1	Y	1	2.5	3.2	32.0	28.5
19	PJ	POA SPP	G	1	Y	13	16.5	8.7	87.0	77.4
19	PJ	UNK COM	F	1	Y	8	4.0	5.4	54.0	48.1
19	PJ	AGR SPP	G	2	N	3	4.0	2.4	23.7	21.1
19	PJ	CRU SPP	F	2	N	0.5	0.7	0.4	4.0	3.6
19	PJ	IPO AGG	F	2	N	0.5	0.7	0.4	4.1	3.6

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
19	PJ	POA SPP	G	2	N	1	1.3	0.8	8.0	7.1
19	PJ	POA SPP	G	3	Y	4	4.5	4.6	46.0	40.9
19	PJ	AGR SPP	G	4	N	0.5	0.7	0.4	3.9	3.5
19	PJ	POA SPP	G	4	N	3.5	4.6	2.8	28.1	25.0
19	PJ	SPH COC	F	4	N	2	2.6	1.6	16.0	14.2
19	PJ	POA SPP	G	5	N	3	3.9	2.4	24.1	21.4
19	PJ	ORY HYM	G	6	Y	3	4.5	5.4	54.0	48.1
19	PJ	UNK COM	F	6	Y	1	1.0	2.6	26.0	23.1
19	PJ	CRY SER	F	7	Y	0.5	2.0	2.9	29.0	25.8
19	PJ	POA SPP	G	7	Y	16	15.5	9.1	91.0	81.0
19	PJ	AGR SPP	G	8	N	1	1.3	0.8	7.9	7.0
19	PJ	IPO AGG	F	8	N	0.5	0.7	0.4	4.1	3.6
19	PJ	ORY HYM	G	8	N	2	2.7	1.6	16.2	14.4
19	PJ	POA SPP	G	9	N	7	9.2	5.6	56.2	50.0
19	PJ	ORY HYM	G	10	Y	0.1	0.0	2.0	20.0	17.8
19	PJ	PHL LON	F	10	Y	0.5	0.0	2.1	21.0	18.7
19	PJ	POA SPP	G	10	Y	0.5	0.0	2.1	21.0	18.7
19	PJ	SIT HYS	G	10	Y	1.5	1.5	2.8	28.0	24.9
20	SB	CAR SPP	G	1	Y	15	18.0	11.1	111	98.8
20	SB	POA SPP	G	1	Y	2.5	1.0	0.9	9.0	8.0
20	SB	SPH COC	F	1	Y	1	1.0	1.4	14.0	12.5
20	SB	AGR SPP	G	2	N	1	1.3	0.8	8.1	7.2
20	SB	AST CON	F	2	N	0.5	0.7	0.4	4.0	3.6
20	SB	ORY HYM	G	2	N	1	1.3	0.8	8.1	7.2
20	SB	POA SPP	G	2	N	1	1.3	0.8	8.1	7.2
20	SB	CRY SER	F	3	N	1	1.3	0.8	8.1	7.2
20	SB	KOE CRI	G	3	N	1	1.3	0.8	8.0	7.2
20	SB	POA SPP	G	3	N	9	11.9	7.3	72.5	64.6
20	SB	CRY SER	F	4	N	0.5	0.7	0.4	4.1	3.6
20	SB	KOE CRI	G	4	N	2	2.7	1.6	16.1	14.3
20	SB	LUP SPP	F	4	N	3	4.0	2.4	24.2	21.5
20	SB	PHL LON	F	4	N	1.5	2.0	1.2	12.1	10.8
20	SB	POA SPP	G	4	N	5	6.6	4.0	40.3	35.9
20	SB	AGR SPP	G	5	Y	7.5	13.0	10.8	108	96.1
20	SB	PHL LON	F	5	Y	1	0.5	2.4	24.0	21.4
20	SB	POA SPP	G	5	Y	6	10.5	8.0	80.0	71.2
20	SB	SPH COC	F	5	Y	0.1	0.0	2.2	22.0	19.6
20	SB	UNK COM	F	5	Y	3	2.5	3.8	38.0	33.8
20	SB	AGR SPP	G	6	Y	8	11.0	7.0	70.0	62.3
20	SB	LUP SPP	F	6	Y	3	6.5	6.4	64.0	57.0
20	SB	PHL LON	F	6	Y	1.5	1.0	1.2	12.0	10.7
20	SB	POA SPP	G	6	Y	5	4.5	2.9	29.0	25.8
20	SB	SEN MUL	F	6	Y	0.1	0.0	0.1	1.0	0.9
20	SB	AGR SPP	G	7	Y	20	29.5	15.0	150	133
20	SB	AST DIV	F	7	Y	2	2.5	1.6	16.0	14.2
20	SB	AGR SPP	G	8	N	4	5.4	3.2	32.3	28.8
20	SB	AST DIV	F	8	N	3.5	4.7	2.8	28.3	25.2
20	SB	POA SPP	G	8	N	2.5	3.3	2.0	20.2	17.9
20	SB	AGR SPP	G	9	N	3	4.0	2.4	24.3	21.6
20	SB	CRY SER	F	9	N	1	1.3	0.8	8.1	7.2

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
20	SB	LUP SPP	F	9	N	8	10.6	6.5	64.5	57.4
20	SB	POA SPP	G	9	N	4	5.3	3.2	32.2	28.7
20	SB	UNK COM	F	9	N	1	1.3	0.8	8.1	7.2
20	SB	AGR SPP	G	10	Y	10	10.5	6.9	69.0	61.4
20	SB	LUP SPP	F	10	Y	6	5.5	6.1	61.0	54.3
20	SB	UNK COM	F	10	Y	0.5	1.0	1.2	12.0	10.7
22	SB	AGR SPP	G	1	Y	2.5	3.0	2.2	22.0	19.6
22	SB	AST SPP	F	1	Y	45	46.5	24.3	243	216
22	SB	COM UMB	F	1	Y	6	11.5	3.9	39.0	34.7
22	SB	HET VIL	F	1	Y	0.5	0.0	0.4	4.0	3.6
22	SB	POA SPP	G	1	Y	4	6.0	3.6	36.0	32.0
22	SB	AGR SPP	G	2	N	6.5	8.7	5.3	52.5	46.8
22	SB	COM UMB	F	2	N	1	1.3	0.8	8.1	7.2
22	SB	PHL LON	F	2	N	0.5	0.7	0.4	4.0	3.6
22	SB	POA SPP	G	2	N	2	2.6	1.6	16.1	14.3
22	SB	AGR SPP	G	3	N	4	5.4	3.2	32.3	28.8
22	SB	BAL SAG	F	3	N	9	12.0	7.2	72.5	64.5
22	SB	COM UMB	F	3	N	2.5	3.3	2.0	20.3	18.0
22	SB	HET VIL	F	3	N	1.5	2.0	1.2	12.1	10.7
22	SB	POA SPP	G	3	N	7	9.3	5.6	56.4	50.2
22	SB	AGR SPP	G	4	Y	5	4.5	2.6	26.0	23.1
22	SB	AST SPP	F	4	Y	30	41.0	19.4	194	173
22	SB	BAL SAG	F	4	Y	3	11.0	10.7	107	95.2
22	SB	ORY HYM	G	4	Y	2	1.0	1.4	14.0	12.5
22	SB	PHL LON	F	4	Y	1	0.5	1.1	11.0	9.8
22	SB	POA SPP	G	4	Y	3.5	4.0	2.4	24.0	21.4
22	SB	UNK COM	F	4	Y	0.5	0.5	0.5	5.0	4.4
22	SB	AST DIV	F	5	N	16	21.4	12.9	129	115
22	SB	BRO TEC	G	5	N	1	1.3	0.8	8.2	7.3
22	SB	CRY SER	F	5	N	0.5	0.7	0.4	4.1	3.6
22	SB	POA SPP	G	5	N	0.5	0.7	0.4	4.0	3.6
22	SB	AGR SPP	G	6	N	12	16.1	9.7	97.0	86.3
22	SB	AST DIV	F	6	N	2	2.7	1.6	16.2	14.4
22	SB	CRY SER	F	6	N	1	1.3	0.8	8.1	7.2
22	SB	HET VIL	F	6	N	0.5	0.7	0.4	4.0	3.6
22	SB	POA SPP	G	6	N	7	9.3	5.6	56.4	50.2
22	SB	SPH COC	F	6	N	1	1.3	0.8	8.0	7.2
22	SB	AGR SPP	G	7	N	6	8.0	4.9	48.5	43.2
22	SB	HET VIL	F	7	N	0.5	0.7	0.4	4.0	3.6
22	SB	PHL LON	F	7	N	2.5	3.3	2.0	20.2	18.0
22	SB	POA SPP	G	7	N	3	4.0	2.4	24.2	21.5
22	SB	SPH COC	F	7	N	1.5	2.0	1.2	12.1	10.7
22	SB	AGR SPP	G	8	Y	13	19.0	10.7	107	95.2
22	SB	BRO TEC	G	8	Y	0.5	0.5	1.0	10.0	8.9
22	SB	PHL LON	F	8	Y	1	0.5	0.9	9.0	8.0
22	SB	POA SPP	G	8	Y	6	8.5	5.5	55.0	48.9
22	SB	SPH COC	F	8	Y	0.5	0.5	0.7	7.0	6.2
22	SB	AGO SPP	F	9	Y	1	1.0	1.0	10.0	8.9
22	SB	AGR SPP	G	9	Y	7	13.5	7.2	72.0	64.1
22	SB	BRO TEC	G	9	Y	0.5	0.5	0.4	4.0	3.6

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
22	SB	CAR SPP	G	9	Y	0.5	0.5	0.5	5.0	4.4
22	SB	KOE CRI	G	9	Y	2	2.5	1.6	16.0	14.2
22	SB	ORY HYM	G	9	Y	4	4.0	2.7	27.0	24.0
22	SB	PHL LON	F	9	Y	0.5	1.0	1.3	13.0	11.6
22	SB	POA SPP	G	9	Y	4	3.5	2.3	23.0	20.5
22	SB	AGR SPP	G	10	Y	13	32.0	16.5	165	147
22	SB	AST SPP	F	10	Y	10	15.5	9.4	94.0	83.7
22	SB	BRO TEC	G	10	Y	0.5	1.0	1.6	16.0	14.2
22	SB	COM UMB	F	10	Y	4	4.5	2.0	20.0	17.8
22	SB	PHL LON	F	10	Y	0.5	1.0	1.3	13.0	11.6
22	SB	POA SPP	G	10	Y	6	14.0	8.2	82.0	73.0
28	SB	AGR SPP	G	1	Y	1	1.0	0.6	6.0	5.3
28	SB	BRO TEC	G	1	Y	1.5	2.5	2.4	24.0	21.4
28	SB	SIT HYS	G	1	Y	12	18.0	11.0	110	97.9
28	SB	AGR SPP	G	2	N	6	8.0	4.9	48.5	43.2
28	SB	BRO TEC	G	2	N	6	8.0	4.9	49.0	43.6
28	SB	BRO TEC	G	3	Y	40	80.0	64.3	643	572
28	SB	PHY FLO	F	4	Y	2	3.5	1.3	13.0	11.6
28	SB	BRO TEC	G	5	N	2	2.7	1.6	16.3	14.5
28	SB	POA SPP	G	5	N	2	2.6	1.6	16.1	14.3
28	SB	BRO TEC	G	6	N	3	4.0	2.4	24.5	21.8
28	SB	POA SPP	G	6	N	2	2.6	1.6	16.1	14.3
28	SB	AGR SPP	G	7	Y	4	6.5	3.5	35.0	31.1
28	SB	BRO TEC	G	7	Y	3	5.0	4.2	42.0	37.4
28	SB	POA SPP	G	7	Y	1.5	1.0	0.9	9.0	8.0
28	SB	SIT HYS	G	7	Y	12	10.5	6.0	60.0	53.4
28	SB	AGR SPP	G	8	N	4	5.4	3.2	32.3	28.8
28	SB	BRO TEC	G	8	N	4	5.3	3.3	32.7	29.1
28	SB	SIT HYS	G	8	N	6	7.9	4.8	48.2	42.9
28	SB	BRO TEC	G	9	N	0.5	0.7	0.4	4.1	3.6
28	SB	CRU SPP	F	9	N	0.5	0.7	0.4	4.1	3.6
28	SB	AGR SPP	G	10	Y	6	20.0	11.0	110	97.9
28	SB	BRO TEC	G	10	Y	60	42.0	32.3	323	287
30	SB	AGR SPP	G	2	N	15	20.1	12.1	121	108
30	SB	AST DIV	F	2	N	2	2.7	1.6	16.2	14.4
30	SB	POA SPP	G	2	N	5	6.6	4.0	40.3	35.9
30	SB	AGR SPP	G	3	N	7	9.4	5.7	56.6	50.4
30	SB	CRY SER	F	3	N	3	4.0	2.4	24.4	21.7
30	SB	ORY HYM	G	3	N	6	7.9	4.8	48.4	43.1
30	SB	POA SPP	G	3	N	4	5.3	3.2	32.2	28.7
30	SB	SIT HYS	G	3	N	3	4.0	2.4	24.1	21.5
30	SB	ORY HYM	G	4	N	2	2.6	1.6	16.1	14.4
30	SB	SIT HYS	G	4	N	35	46.2	28.1	281	250
30	SB	AGR SPP	G	5	Y	0.5	0.5	0.3	3.0	2.7
30	SB	CRY SPP	F	5	Y	0.5	0.5	0.3	3.0	2.7
30	SB	ORY HYM	G	5	Y	2	3.0	1.5	15.0	13.3
30	SB	POA SPP	G	5	Y	1	1.0	0.7	7.0	6.2
30	SB	SPH COC	F	5	Y	3	7.5	3.6	36.0	32.0
30	SB	AGR SPP	G	6	Y	35	39.5	17.4	174	155
30	SB	CRY SER	F	6	Y	1.5	4.5	1.5	15.0	13.3

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
30	SB	ORY HYM	G	6	Y	0.5	1.0	0.5	5.0	4.4
30	SB	POA SPP	G	6	Y	1.5	4.0	1.4	14.0	12.5
30	SB	SIT HYS	G	6	Y	3.5	6.5	3.1	31.0	27.6
30	SB	AGR SPP	G	7	N	1.5	2.0	1.2	12.1	10.8
30	SB	ORY HYM	G	7	N	2	2.6	1.6	16.1	14.4
30	SB	POA SPP	G	7	N	3	4.0	2.4	24.2	21.5
30	SB	SIT HYS	G	7	N	16	21.1	12.9	129	114
30	SB	AGR SPP	G	8	N	6	8.0	4.9	48.5	43.2
30	SB	POA SPP	G	8	N	2	2.6	1.6	16.1	14.3
30	SB	CRU SPP	F	9	Y	3.5	5.5	2.4	24.0	21.4
30	SB	ORY HYM	G	9	Y	3	4.0	2.0	20.0	17.8
30	SB	POA SPP	G	9	Y	9	13.0	4.0	40.0	35.6
30	SB	SIT HYS	G	9	Y	25	20.0	10.0	100	89.0
30	SB	AGR SPP	G	10	Y	15	34.0	14.9	149	133
30	SB	ORY HYM	G	10	Y	6	9.0	4.5	45.0	40.0
30	SB	POA SPP	G	10	Y	1	0.5	0.3	3.0	2.7
31	MB	AGR SPP	G	1	Y	30	43.5	24.1	241	214
31	MB	ARE FEN	F	1	Y	3	2.0	1.6	16.0	14.2
31	MB	AST DIV	F	1	Y	7	20.0	9.7	97.0	86.3
31	MB	CAR SPP	G	1	Y	4	7.0	4.1	41.0	36.5
31	MB	ERI UMB	F	1	Y	0.1	0.5	0.2	2.0	1.8
31	MB	HED BOR	F	1	Y	30	40.0	22.0	220	196
31	MB	HET VIL	F	1	Y	2.5	5.0	2.9	29.0	25.8
31	MB	IPO AGG	F	1	Y	0.5	0.5	0.3	3.0	2.7
31	MB	ORY HYM	G	1	Y	1	1.0	0.8	8.0	7.1
31	MB	PEN CAE	F	1	Y	0.5	0.5	0.6	6.0	5.3
31	MB	POA SPP	G	1	Y	5	15.0	6.8	68.0	60.5
31	MB	ANT SPP	F	2	N	1.5	2.1	1.3	13.4	11.9
31	MB	CAR SPP	G	2	N	20	28.3	17.7	177	158
31	MB	HED BOR	F	2	N	5	6.8	3.9	38.7	34.5
31	MB	HET VIL	F	2	N	1.5	2.0	1.2	11.7	10.4
31	MB	HYM ACA	F	2	N	1	1.4	0.8	7.8	6.9
31	MB	LIT RUD	F	2	N	3	4.1	2.3	23.2	20.7
31	MB	ORY HYM	G	2	N	3	4.0	2.4	23.6	21.0
31	MB	PEN CAE	F	2	N	1.5	2.0	1.2	11.8	10.5
31	MB	POA SPP	G	2	N	10	13.5	8.0	80.0	71.2
31	MB	AGR SPP	G	3	Y	20	38.0	22.0	220	196
31	MB	CAR SPP	G	3	Y	3	3.5	2.0	20.0	17.8
31	MB	COM UMB	F	3	Y	2.5	1.5	0.6	6.0	5.3
31	MB	ERI UMB	F	3	Y	8	9.5	5.9	59.0	52.5
31	MB	HAP NUT	F	3	Y	12	15.5	7.4	74.0	65.9
31	MB	HET VIL	F	3	Y	0.5	0.5	0.3	3.0	2.7
31	MB	POA SPP	G	3	Y	1.5	2.0	1.2	12.0	10.7
31	MB	AGR SPP	G	4	N	9	12.9	8.1	81.3	72.3
31	MB	COM UMB	F	4	N	3	4.3	2.4	24.5	21.8
31	MB	ERI UMB	F	4	N	20	27.3	15.8	158	141
31	MB	HET VIL	F	4	N	2	2.7	1.6	15.6	13.9
31	MB	KOE CRI	G	4	N	1.5	2.0	1.2	11.7	10.4
31	MB	LIN LEW	F	4	N	2	2.7	1.6	15.5	13.8
31	MB	ORY HYM	G	4	N	8	10.7	6.3	62.9	56.0

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
31	MB	POA SPP	G	4	N	8	10.8	6.4	64.0	57.0
31	MB	AGR SPP	G	5	N	6	8.6	5.4	54.2	48.2
31	MB	CAR SPP	G	5	N	1.5	2.1	1.3	13.3	11.8
31	MB	COM UMB	F	5	N	20	28.5	16.3	163	145
31	MB	CRE SPP	F	5	N	4.5	6.4	3.7	37.1	33.0
31	MB	ERI UMB	F	5	N	10	13.6	7.9	79.1	70.4
31	MB	HED BOR	F	5	N	6	8.2	4.6	46.5	41.4
31	MB	HET VIL	F	5	N	3	4.1	2.3	23.3	20.8
31	MB	KOE CRI	G	5	N	3	4.1	2.3	23.3	20.7
31	MB	PHY FLO	F	5	N	1	1.3	0.8	7.9	7.0
31	MB	POA SPP	G	5	N	8	10.8	6.4	64.0	57.0
31	MB	UNK COM	F	5	N	25	33.5	19.8	198	176
31	MB	AGR SPP	G	6	Y	25	33.0	19.3	193	172
31	MB	COM UMB	F	6	Y	15	23.0	9.0	90.0	80.1
31	MB	CRE SPP	F	6	Y	2	1.0	1.3	13.0	11.6
31	MB	ERI UMB	F	6	Y	8	6.5	3.9	39.0	34.7
31	MB	HET VIL	F	6	Y	0.5	0.5	0.7	7.0	6.2
31	MB	KOE CRI	G	6	Y	3	3.0	2.0	20.0	17.8
31	MB	LIN LEW	F	6	Y	4	7.5	3.4	34.0	30.3
31	MB	MAC PAT	F	6	Y	1.5	1.0	0.9	9.0	8.0
31	MB	ORY HYM	G	6	Y	4.5	8.5	5.1	51.0	45.4
31	MB	PHL LON	F	6	Y	0.5	0.5	0.7	7.0	6.2
31	MB	PHY FLO	F	6	Y	0.5	1.0	0.7	7.0	6.2
31	MB	POA SPP	G	6	Y	2	3.5	1.7	17.0	15.1
31	MB	COM UMB	F	7	Y	7	3.5	1.5	15.0	13.3
31	MB	CRY SER	F	7	Y	1	2.5	1.3	13.0	11.6
31	MB	ERI UMB	F	7	Y	10	17.0	9.0	90.0	80.1
31	MB	LIN LEW	F	7	Y	0.5	0.5	0.4	4.0	3.6
31	MB	LUP ARG	F	7	Y	8	12.5	5.3	53.0	47.2
31	MB	ORY HYM	G	7	Y	9	10.0	7.1	71.0	63.2
31	MB	PEN CAE	F	7	Y	2	1.0	1.1	11.0	9.8
31	MB	PHY FLO	F	7	Y	1.5	2.5	1.1	11.0	9.8
31	MB	STI SPP	G	7	Y	20	20.0	3.0	30.0	26.7
31	MB	COM UMB	F	8	N	8	11.4	6.5	65.3	58.1
31	MB	CRE SPP	F	8	N	1.5	2.1	1.2	12.4	11.0
31	MB	HED BOR	F	8	N	8	10.9	6.2	62.0	55.1
31	MB	KOE CRI	G	8	N	2	2.7	1.6	15.5	13.8
31	MB	ORY HYM	G	8	N	2	2.7	1.6	15.7	14.0
31	MB	POA SPP	G	8	N	12	16.2	9.6	96.0	85.4
31	MB	UNK COM	F	8	N	7	9.4	5.6	55.5	49.4
31	MB	ACH LAN	F	9	N	2	1.3	1.0	10.0	8.9
31	MB	AGR SPP	G	9	N	11	15.8	9.9	99.3	88.4
31	MB	COM UMB	F	9	N	4	5.7	3.3	32.6	29.1
31	MB	ERI UMB	F	9	N	2	2.7	1.6	15.8	14.1
31	MB	IPO AGG	F	9	N	0.5	0.7	0.4	3.9	3.5
31	MB	LIT RUD	F	9	N	2	2.7	1.5	15.5	13.8
31	MB	PEN CAE	F	9	N	1	1.3	0.8	7.9	7.0
31	MB	POA SPP	G	9	N	9	12.1	7.2	72.0	64.1
31	MB	UNK COM	F	9	N	3	4.0	2.4	23.8	21.2
31	MB	AST DIV	F	10	Y	1.5	1.0	0.8	8.0	7.1

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
31	MB	HYM ACA	F	10	Y	1.5	2.0	0.8	8.0	7.1
31	MB	LIN LEW	F	10	Y	2	1.5	0.8	8.0	7.1
32	MB	AGR SPP	G	1	Y	0.5	1.0	0.8	8.0	7.1
32	MB	ANT SPP	F	1	Y	4.5	3.0	2.3	23.0	20.5
32	MB	HEU PAR	F	1	Y	0.5	0.5	0.6	6.0	5.3
32	MB	POA SPP	G	1	Y	3	2.5	1.5	15.0	13.3
32	MB	ACH LAN	F	2	N	0.5	0.3	0.2	2.5	2.2
32	MB	AGR SPP	G	2	N	6.5	9.3	5.9	58.7	52.2
32	MB	ANT SPP	F	2	N	4.5	6.4	4.0	40.1	35.7
32	MB	CRY SER	F	2	N	3.5	4.9	2.9	28.9	25.7
32	MB	HET VIL	F	2	N	1	1.4	0.8	7.8	6.9
32	MB	PEN CAE	F	2	N	2	2.7	1.6	15.8	14.1
32	MB	POA SPP	G	2	N	8	10.8	6.4	64.0	57.0
32	MB	AGR SPP	G	3	Y	25	42.0	24.1	241	214
32	MB	HEU PAR	F	3	Y	0.5	0.5	0.4	4.0	3.6
32	MB	ORY HYM	G	3	Y	16	23.5	13.0	130	116
32	MB	POA SPP	G	3	Y	2.5	2.5	1.7	17.0	15.1
32	MB	AGR SPP	G	4	Y	8	9.0	5.4	54.0	48.1
32	MB	CHA DOU	F	4	Y	1	0.5	0.7	7.0	6.2
32	MB	CRU SPP	F	4	Y	2	2.5	1.5	15.0	13.3
32	MB	HET VIL	F	4	Y	2	4.0	2.4	24.0	21.4
32	MB	ORY HYM	G	4	Y	2	2.5	1.6	16.0	14.2
32	MB	POA SPP	G	4	Y	6	9.5	5.0	50.0	44.5
32	MB	SPH COC	F	4	Y	1.5	1.5	1.1	11.0	9.8
32	MB	UNK COM	F	4	Y	1.5	2.0	1.2	12.0	10.7
32	MB	AGR SPP	G	5	N	6	8.6	5.4	54.2	48.2
32	MB	ERI UMB	F	5	N	2.5	3.4	2.0	19.8	17.6
32	MB	HET VIL	F	5	N	1.5	2.0	1.2	11.7	10.4
32	MB	POA SPP	G	5	N	8	10.8	6.4	64.0	57.0
32	MB	AGR SPP	G	6	N	16	23.0	14.4	144	129
32	MB	CRE SPP	F	6	N	1	1.4	0.8	8.2	7.3
32	MB	ERI UMB	F	6	N	4	5.5	3.2	31.6	28.2
32	MB	MAC PAT	F	6	N	1	1.3	0.8	7.7	6.8
32	MB	PHL LON	F	6	N	0.5	0.7	0.4	4.0	3.5
32	MB	POA SPP	G	6	N	5	6.7	4.0	40.0	35.6
32	MB	UNK COM	F	6	N	3	4.0	2.4	23.8	21.2
32	MB	ACH LAN	F	7	Y	3	2.0	1.5	15.0	13.3
32	MB	AGR SPP	G	7	Y	30	35.0	26.4	264	235
32	MB	ANT SPP	F	7	Y	6	3.5	2.3	23.0	20.5
32	MB	CRU SPP	F	7	Y	1	1.0	0.8	8.0	7.1
32	MB	ERI UMB	F	7	Y	7	7.5	4.5	45.0	40.0
32	MB	HET VIL	F	7	Y	1	1.0	0.7	7.0	6.2
32	MB	KOE CRI	G	7	Y	2	1.5	0.9	9.0	8.0
32	MB	PHL LON	F	7	Y	0.5	1.0	0.8	8.0	7.1
32	MB	POA SPP	G	7	Y	7	6.0	3.4	34.0	30.3
32	MB	HET VIL	F	8	N	1.5	2.0	1.2	11.7	10.4
32	MB	HEU PAR	F	8	N	2.5	3.4	1.9	19.5	17.3
32	MB	ORY HYM	G	8	N	8	10.7	6.3	62.9	56.0
32	MB	POA SPP	G	8	N	3	4.0	2.4	24.0	21.4
32	MB	AGR SPP	G	9	N	3	4.3	2.7	27.1	24.1

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
32	MB	ANT SPP	F	9	N	4.5	6.4	4.0	40.1	35.7
32	MB	CRY SER	F	9	N	1	1.4	0.8	8.2	7.3
32	MB	ERI UMB	F	9	N	6	8.2	4.7	47.5	42.3
32	MB	HET VIL	F	9	N	1	1.4	0.8	7.8	6.9
32	MB	PHL LON	F	9	N	1	1.3	0.8	7.9	7.0
32	MB	POA SPP	G	9	N	11	14.8	8.8	88.0	78.3
32	MB	AGR SPP	G	10	Y	9	11.0	6.7	67.0	59.6
32	MB	ANT SPP	F	10	Y	1.5	1.0	1.0	10.0	8.9
32	MB	AST DIV	F	10	Y	7	8.0	4.3	43.0	38.3
32	MB	CRE SPP	F	10	Y	2	1.0	1.3	13.0	11.6
32	MB	CRY SER	F	10	Y	1.5	1.0	0.9	9.0	8.0
32	MB	ERI UMB	F	10	Y	6	7.0	4.5	45.0	40.0
32	MB	HEU PAR	F	10	Y	2.5	3.0	1.8	18.0	16.0
32	MB	POA SPP	G	10	Y	25	32.5	21.8	218	194
33	MB	AGR SPP	G	1	Y	12	14.5	9.9	99.0	88.1
33	MB	AST DIV	F	1	Y	2.5	3.0	2.0	20.0	17.8
33	MB	BRO TEC	G	1	Y	1	1.0	1.0	10.0	8.9
33	MB	CRE SPP	F	1	Y	0.5	1.0	0.7	7.0	6.2
33	MB	CRU SPP	F	1	Y	3	2.0	2.1	21.0	18.7
33	MB	HET VIL	F	1	Y	1	1.0	1.2	12.0	10.7
33	MB	IPO AGG	F	1	Y	0.5	1.0	0.8	8.0	7.1
33	MB	KOE CRI	G	1	Y	1.5	1.0	1.1	11.0	9.8
33	MB	ORY HYM	G	1	Y	4.5	6.5	4.2	42.0	37.4
33	MB	PEN CAE	F	1	Y	5	7.0	4.5	45.0	40.0
33	MB	POA SPP	G	1	Y	2	1.5	1.1	11.0	9.8
33	MB	SIT HYS	G	1	Y	5	8.5	5.7	57.0	50.7
33	MB	SPH COC	F	1	Y	2	6.5	3.5	35.0	31.1
33	MB	AGR SPP	G	2	N	2	2.9	1.8	18.1	16.1
33	MB	PEN CAE	F	2	N	1	1.3	0.8	7.9	7.0
33	MB	POA SPP	G	2	N	3	4.0	2.4	24.0	21.4
33	MB	AGR SPP	G	3	N	8	11.5	7.2	72.2	64.3
33	MB	COM UMB	F	3	N	10	14.3	8.2	81.6	72.6
33	MB	HET VIL	F	3	N	4	5.5	3.1	31.1	27.7
33	MB	ORY HYM	G	3	N	6	8.0	4.7	47.2	42.0
33	MB	PEN CAE	F	3	N	4.5	6.0	3.6	35.5	31.6
33	MB	ORY HYM	G	4	Y	6	10.0	8.0	80.0	71.2
33	MB	PEN CAE	F	4	Y	1	1.0	1.1	11.0	9.8
33	MB	POA SPP	G	4	Y	2	2.5	1.7	17.0	15.1
33	MB	SIT HYS	G	4	Y	2	3.0	2.1	21.0	18.7
33	MB	SPH COC	F	4	Y	0.5	0.5	0.6	6.0	5.3
33	MB	COM UMB	F	5	Y	11	19.0	6.5	65.0	57.8
33	MB	ERI UMB	F	5	Y	2	1.0	1.5	15.0	13.3
33	MB	ORY HYM	G	5	Y	18	17.0	10.3	103	91.7
33	MB	PHL LON	F	5	Y	0.5	0.5	0.5	5.0	4.4
33	MB	POA SPP	G	5	Y	0.5	1.0	0.9	9.0	8.0
33	MB	AGR SPP	G	6	N	2	2.9	1.8	18.1	16.1
33	MB	COM UMB	F	6	N	8	11.4	6.5	65.3	58.1
33	MB	HED BOR	F	6	N	3	4.1	2.3	23.2	20.7
33	MB	POA SPP	G	6	N	5	6.7	4.0	40.0	35.6
33	MB	SIT HYS	G	6	N	2.5	3.4	2.0	20.0	17.8

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
33	MB	AGR SPP	G	7	N	3.5	5.0	3.2	31.6	28.1
33	MB	AST DIV	F	7	N	4	5.7	3.5	35.4	31.5
33	MB	BRO TEC	G	7	N	0.5	0.7	0.4	4.4	3.9
33	MB	CRE SPP	F	7	N	1	1.4	0.8	8.2	7.3
33	MB	HED BOR	F	7	N	3.5	4.8	2.7	27.1	24.1
33	MB	PEN CAE	F	7	N	1	1.3	0.8	7.9	7.0
33	MB	BRO TEC	G	8	N	1	1.4	0.9	8.9	7.9
33	MB	CHA DOU	F	8	N	6	8.5	5.3	53.2	47.4
33	MB	COM UMB	F	8	N	7	10.0	5.7	57.1	50.8
33	MB	MAC PAT	F	8	N	6	7.9	4.6	45.9	40.9
33	MB	ORY HYM	G	8	N	18	24.1	14.2	142	126
33	MB	SIT HYS	G	8	N	1	1.3	0.8	8.0	7.1
33	MB	COM UMB	F	9	Y	4	7.0	2.9	29.0	25.8
33	MB	ORY HYM	G	9	Y	11	15.5	9.7	97.0	86.3
33	MB	PEN CAE	F	9	Y	0.5	0.5	0.8	8.0	7.1
33	MB	PHL LON	F	9	Y	0.5	0.5	0.6	6.0	5.3
33	MB	POA SPP	G	9	Y	1	3.0	1.5	15.0	13.3
33	MB	AGR SPP	G	10	Y	1.5	1.0	0.7	7.0	6.2
33	MB	HET VIL	F	10	Y	1	1.0	0.5	5.0	4.4
33	MB	MAC PAT	F	10	Y	2	1.0	1.0	10.0	8.9
33	MB	ORY HYM	G	10	Y	10	23.0	13.5	135	120
33	MB	POA SPP	G	10	Y	3	1.5	1.5	15.0	13.3
33	MB	SIT HYS	G	10	Y	1	0.5	0.8	8.0	7.1
34	MB	AST DIV	F	1	Y	1	1.5	0.5	5.0	4.4
34	MB	HAP NUT	F	1	Y	1.5	2.0	1.8	18.0	16.0
34	MB	AGR SPP	G	2	N	4	5.8	3.6	36.1	32.2
34	MB	AST DIV	F	2	N	0.5	0.7	0.4	4.4	3.9
34	MB	HAP NUT	F	2	N	1.5	2.0	1.2	11.8	10.5
34	MB	PEN CAE	F	2	N	0.5	0.7	0.4	3.9	3.5
34	MB	AGR SPP	G	3	N	3	4.3	2.7	27.1	24.1
34	MB	CRY SER	F	3	N	1	1.4	0.8	8.2	7.3
34	MB	LUP ARG	F	3	N	10	13.2	7.7	76.5	68.1
34	MB	ORY HYM	G	3	N	1.5	2.0	1.2	11.8	10.5
34	MB	CAR SPP	G	4	N	2	2.8	1.8	17.7	15.8
34	MB	CRY SER	F	4	N	1.5	2.1	1.2	12.4	11.0
34	MB	ERI UMB	F	4	N	1	1.4	0.8	7.9	7.0
34	MB	ORY HYM	G	4	N	16	21.4	12.6	126	112
34	MB	POA SPP	G	4	N	1	1.3	0.8	8.0	7.1
34	MB	SPH COC	F	4	N	4	5.4	3.2	32.0	28.5
34	MB	CRY SER	F	5	Y	3.5	5.5	3.2	32.0	28.5
34	MB	MAC PAT	F	5	Y	2	1.5	1.2	12.0	10.7
34	MB	ORY HYM	G	5	Y	9	10.5	7.3	73.0	65.0
34	MB	PEN CAE	F	5	Y	3	3.5	2.3	23.0	20.5
34	MB	PHY FLO	F	5	Y	1.5	1.0	0.9	9.0	8.0
34	MB	SPH COC	F	5	Y	2.5	1.5	1.4	14.0	12.5
34	MB	AGR SPP	G	6	N	2	2.9	1.8	18.1	16.1
34	MB	AST SPP	F	6	N	1	1.4	0.9	8.9	7.9
34	MB	CRY SER	F	6	N	1	1.4	0.8	8.2	7.3
34	MB	ORY HYM	G	6	N	10	13.4	7.9	78.6	70.0
34	MB	PEN CAE	F	6	N	1	1.3	0.8	7.9	7.0

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
34	MB	PHY FLO	F	6	N	0.5	0.7	0.4	4.0	3.5
34	MB	POA SPP	G	6	N	1	1.3	0.8	8.0	7.1
34	MB	SAL KAL	F	6	N	0.5	0.7	0.4	4.0	3.6
34	MB	SPH COC	F	6	N	1.5	2.0	1.2	12.0	10.7
34	MB	AGR SPP	G	7	Y	1.5	1.0	0.7	7.0	6.2
34	MB	AST DIV	F	7	Y	1	0.5	0.5	5.0	4.4
34	MB	HED BOR	F	7	Y	1	1.0	0.6	6.0	5.3
34	MB	ORY HYM	G	7	Y	6	7.5	5.4	54.0	48.1
34	MB	PEN CAE	F	7	Y	0.5	1.0	0.4	4.0	3.6
34	MB	AGR SPP	G	8	N	3	4.3	2.7	27.1	24.1
34	MB	HAP NUT	F	8	N	2.5	3.4	2.0	19.7	17.5
34	MB	ORY HYM	G	8	N	1.5	2.0	1.2	11.8	10.5
34	MB	AGR SPP	G	9	Y	18	38.5	22.9	229	204
34	MB	CRE SPP	F	9	Y	2.5	2.5	2.4	24.0	21.4
34	MB	ERI UMB	F	9	Y	1	1.5	0.9	9.0	8.0
34	MB	MAC PAT	F	9	Y	3	5.5	3.0	30.0	26.7
34	MB	ORY HYM	G	9	Y	3.5	3.5	2.2	22.0	19.6
34	MB	PEN CAE	F	9	Y	1	1.5	1.0	10.0	8.9
34	MB	SPH COC	F	9	Y	2	3.0	1.7	17.0	15.1
34	MB	AGR SPP	G	10	Y	18	29.5	16.8	168	150
34	MB	ERI LON	F	10	Y	10	22.0	11.4	114	101
34	MB	HAP NUT	F	10	Y	1	3.0	1.6	16.0	14.2
34	MB	ORY HYM	G	10	Y	0.1	0.0	0.3	3.0	2.7
34	MB	PEN CAE	F	10	Y	1	1.5	0.9	9.0	8.0
34	MB	PHL LON	F	10	Y	0.5	0.0	0.3	3.0	2.7
34	MB	PHY FLO	F	10	Y	1	2.0	0.9	9.0	8.0
34	MB	POA SPP	G	10	Y	2	1.5	1.3	13.0	11.6
34	MB	SPH COC	F	10	Y	0.5	0.0	0.3	3.0	2.7
35	MB	AGR SPP	G	1	Y	18	37.5	25.8	258	230
35	MB	ERI UMB	F	1	Y	2.5	5.0	2.7	27.0	24.0
35	MB	ORY HYM	G	1	Y	7	12.0	8.1	81.0	72.1
35	MB	AGR SPP	G	2	Y	45	72.5	45.6	456	406
35	MB	ERI UMB	F	2	Y	2	7.0	4.0	40.0	35.6
35	MB	HET VIL	F	2	Y	1	0.5	0.8	8.0	7.1
35	MB	ORY HYM	G	2	Y	2	4.5	3.3	33.0	29.4
35	MB	POA SPP	G	2	Y	4	12.0	6.8	68.0	60.5
35	MB	AGR SPP	G	3	Y	12	13.5	8.0	80.0	71.2
35	MB	ERI LON	F	3	Y	80	62.5	29.8	298	265
35	MB	ORY HYM	G	3	Y	6	4.0	2.8	28.0	24.9
35	MB	PEN CAE	F	3	Y	0.5	0.5	0.8	8.0	7.1
35	MB	AGR SPP	G	4	N	6	8.6	5.4	54.2	48.2
35	MB	AGR SPP	G	5	N	6	8.6	5.4	54.2	48.2
35	MB	PEN CAE	F	5	N	1	1.3	0.8	7.9	7.0
35	MB	PHY FLO	F	5	N	0.5	0.7	0.4	4.0	3.5
35	MB	AGR SPP	G	7	Y	13	15.0	9.2	92.0	81.9
35	MB	CRU SPP	F	7	Y	6	8.5	5.1	51.0	45.4
35	MB	ORY HYM	G	7	Y	5	10.0	6.7	67.0	59.6
35	MB	AGR SPP	G	8	N	10	14.4	9.0	90.3	80.4
35	MB	ERI UMB	F	8	N	1	1.4	0.8	7.9	7.0
35	MB	HAP NUT	F	8	N	9	12.3	7.1	70.9	63.1

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TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
35	MB	ORY HYM	G	8	N	2.5	3.3	2.0	19.7	17.5
35	MB	AGR SPP	G	9	N	12	17.3	10.8	108	96.5
35	MB	ART LUD	F	9	N	8	11.3	7.1	71.2	63.3
35	MB	HET VIL	F	9	N	1	1.4	0.8	7.8	6.9
35	MB	PHY FLO	F	9	N	1	1.3	0.8	7.9	7.0
35	MB	POA SPP	G	9	N	2	2.7	1.6	16.0	14.2
35	MB	AGR SPP	G	10	Y	14	26.5	14.6	146	130
35	MB	HED BOR	F	10	Y	50	66.0	40.4	404	360
35	MB	KOE CRI	G	10	Y	3	3.5	2.9	29.0	25.8
35	MB	ORY HYM	G	10	Y	12	15.0	11.6	116	103
35	MB	PEN CAE	F	10	Y	2.5	3.0	2.7	27.0	24.0
35	MB	POA SPP	G	10	Y	6	12.5	7.0	70.0	62.3
35	MB	SPH COC	F	10	Y	0.5	0.5	0.4	4.0	3.6
36	MB	AGR SPP	G	1	Y	4	5.0	3.1	31.0	27.6
36	MB	AST SPP	F	1	Y	0.1	0.0	0.3	3.0	2.7
36	MB	BRO TEC	G	1	Y	0.1	0.0	0.5	5.0	4.4
36	MB	COM UMB	F	1	Y	2	5.5	3.0	30.0	26.7
36	MB	PHL LON	F	1	Y	0.1	0.5	0.7	7.0	6.2
36	MB	POA SPP	G	1	Y	0.5	0.5	0.5	5.0	4.4
36	MB	UNK SPP	F	1	Y	1	0.5	0.1	1.0	0.9
36	MB	AGR SPP	G	2	N	5.5	7.9	5.0	49.7	44.2
36	MB	AGR SPP	G	2	N	1	1.4	0.9	9.0	8.0
36	MB	COM UMB	F	2	N	1	1.4	0.8	8.2	7.3
36	MB	UNK COM	F	2	N	1.5	2.0	1.2	11.9	10.6
36	MB	AGR SPP	G	3	Y	2	1.5	1.1	11.0	9.8
36	MB	COM UMB	F	3	Y	1.5	1.5	1.2	12.0	10.7
36	MB	AGR SPP	G	4	N	2	2.9	1.8	18.1	16.1
36	MB	AST CON	F	4	N	2	2.8	1.8	17.8	15.8
36	MB	COM UMB	F	4	N	5.5	7.8	4.5	44.9	39.9
36	MB	IPO AGG	F	4	N	2.5	3.4	1.9	19.4	17.3
36	MB	PHL LON	F	4	N	0.5	0.7	0.4	4.0	3.5
36	MB	POA SPP	G	4	N	3.5	4.7	2.8	28.0	24.9
36	MB	UNK SPP	F	4	N	0.5	0.7	0.4	4.0	3.5
36	MB	AGR SPP	G	5	N	3	4.3	2.7	27.1	24.1
36	MB	COM UMB	F	5	N	12	17.1	9.8	97.9	87.2
36	MB	PHL LON	F	5	N	0.5	0.7	0.4	4.0	3.5
36	MB	POA SPP	G	5	N	3.5	4.7	2.8	28.0	24.9
36	MB	UNK SPP	F	5	N	0.5	0.7	0.4	4.0	3.5
36	MB	AGR SPP	G	6	Y	2.5	1.0	1.3	13.0	11.6
36	MB	COM UMB	F	6	Y	6	10.5	5.3	53.0	47.2
36	MB	IPO AGG	F	6	Y	0.5	1.0	0.9	9.0	8.0
36	MB	PHL LON	F	6	Y	1	1.5	1.8	18.0	16.0
36	MB	POA SPP	G	6	Y	1.5	1.5	1.5	15.0	13.3
36	MB	UNK COM	F	6	Y	0.5	0.5	0.7	7.0	6.2
36	MB	AGR SPP	G	7	N	3	4.3	2.7	27.1	24.1
36	MB	MAC PAT	F	7	N	1.5	2.0	1.1	11.5	10.2
36	MB	ORY HYM	G	7	N	2	2.7	1.6	15.7	14.0
36	MB	PHL LON	F	7	N	0.5	0.7	0.4	4.0	3.5
36	MB	POA SPP	G	7	N	2.5	3.4	2.0	20.0	17.8
36	MB	AGR SPP	G	8	Y	1	0.5	0.5	5.0	4.4

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36	MB	ORY HYM	G	8	Y	0.5	0.5	0.5	5.0	4.4
36	MB	PHL LON	F	8	Y	0.1	0.0	0.5	5.0	4.4
36	MB	POA SPP	G	8	Y	3	3.0	2.5	25.0	22.2
36	MB	AGR SPP	G	9	N	1	1.4	0.9	9.0	8.0
36	MB	IPO AGG	F	9	N	0.5	0.7	0.4	3.9	3.5
36	MB	POA SPP	G	9	N	1.5	2.0	1.2	12.0	10.7
36	MB	AGR SPP	G	10	Y	1.5	1.0	1.2	12.0	10.7
36	MB	COM UMB	F	10	Y	3	5.5	3.2	32.0	28.5
36	MB	KOE CRI	G	10	Y	1	1.0	1.4	14.0	12.5
36	MB	POA SPP	G	10	Y	1	1.0	1.5	15.0	13.3
37	PJ	BAL SAG	F	1	Y	28	36.0	50.7	507	451
37	PJ	BAL SAG	F	2	N	20	26.7	16.1	161	143
37	PJ	CAR SPP	G	2	N	1.5	2.0	1.2	12.1	10.8
37	PJ	AGR SPP	G	3	N	1	1.3	0.8	7.9	7.0
37	PJ	CAR SPP	G	3	N	1	1.3	0.8	8.1	7.2
37	PJ	AGR SPP	G	4	N	5	6.7	3.9	39.5	35.1
37	PJ	CAR SPP	G	4	N	2.5	3.3	2.0	20.1	17.9
37	PJ	ORY HYM	G	5	Y	2.5	5.0	3.5	35.0	31.1
37	PJ	POA SPP	G	5	Y	1.5	1.0	1.1	11.0	9.8
37	PJ	AGR SPP	G	6	Y	7	7.0	3.8	38.0	33.8
37	PJ	ORY HYM	G	6	Y	2	1.5	1.1	11.0	9.8
37	PJ	BRO TEC	G	7	Y	1	0.5	0.6	6.0	5.3
37	PJ	CAR SPP	G	7	Y	3	0.5	2.9	29.0	25.8
37	PJ	POA SPP	G	7	Y	1.5	1.0	1.0	10.0	8.9
37	PJ	SIT HYS	G	7	Y	1.5	2.0	1.3	13.0	11.6
37	PJ	BOR SPP	F	8	N	0.5	0.7	0.4	4.0	3.6
37	PJ	BRO TEC	G	8	N	0.5	0.7	0.4	4.0	3.6
37	PJ	CRY SER	F	8	N	3.5	4.7	2.8	28.4	25.3
37	PJ	ORY HYM	G	8	N	3	4.0	2.4	24.3	21.7
37	PJ	POA SPP	G	8	N	7.5	9.9	6.0	60.2	53.6
37	PJ	SIT HYS	G	8	N	8	10.5	6.4	63.9	56.8
37	PJ	AGR SPP	G	10	Y	1	1.0	0.8	8.0	7.1
37	PJ	UNK COM	F	10	Y	0.5	0.5	0.4	4.0	3.6
38	SB	AGR SPP	G	1	Y	6	7.5	4.2	42.0	37.4
38	SB	AST SPP	F	1	Y	0.1	0.5	0.1	1.0	0.9
38	SB	CAR SPP	G	1	Y	2	3.0	1.3	13.0	11.6
38	SB	HYM ACA	F	1	Y	1	1.0	0.4	4.0	3.6
38	SB	PHL LON	F	1	Y	0.5	1.0	0.6	6.0	5.3
38	SB	POA SPP	G	1	Y	3	3.5	1.6	16.0	14.2
38	SB	STI SPP	G	1	Y	4	4.5	2.4	24.0	21.4
38	SB	AGR SPP	G	2	N	2.5	3.4	2.0	20.2	18.0
38	SB	AST DIV	F	2	N	4	5.4	3.2	32.3	28.8
38	SB	AST SPP	F	2	N	0.5	0.7	0.4	4.0	3.6
38	SB	CAR SPP	G	2	N	2	2.7	1.6	16.3	14.5
38	SB	PHL LON	F	2	N	1	1.3	0.8	8.1	7.2
38	SB	POA SPP	G	2	N	3.5	4.6	2.8	28.2	25.1
38	SB	STI SPP	G	2	N	2	2.6	1.6	16.1	14.3
38	SB	AGR SPP	G	3	N	2	2.7	1.6	16.2	14.4
38	SB	HAP NUT	F	3	N	3	4.0	2.4	24.2	21.5
38	SB	HET VIL	F	3	N	1.5	2.0	1.2	12.1	10.7

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
38	SB	ORY HYM	G	3	N	2.5	3.3	2.0	20.2	17.9
38	SB	PHL LON	F	3	N	1	1.3	0.8	8.1	7.2
38	SB	PHY FLO	F	3	N	0.5	0.7	0.4	4.0	3.6
38	SB	POA SPP	G	3	N	3	4.0	2.4	24.2	21.5
38	SB	AGR SPP	G	4	Y	2	2.0	1.2	12.0	10.7
38	SB	CHA DOU	F	4	Y	0.5	0.5	0.3	3.0	2.7
38	SB	COM UMB	F	4	Y	30	50.0	8.6	86.0	76.5
38	SB	ORY HYM	G	4	Y	3.5	2.0	1.8	18.0	16.0
38	SB	POA SPP	G	4	Y	9	10.0	5.7	57.0	50.7
38	SB	AGR SPP	G	5	N	7	9.4	5.7	56.6	50.4
38	SB	AST DIV	F	5	N	1.5	2.0	1.2	12.1	10.8
38	SB	HAP NUT	F	5	N	2	2.7	1.6	16.1	14.3
38	SB	PEN CAE	F	5	N	0.5	0.7	0.4	4.0	3.6
38	SB	POA SPP	G	5	N	3.5	4.6	2.8	28.2	25.1
38	SB	SEN MUL	F	5	N	0.5	0.7	0.4	4.0	3.6
38	SB	AGR SPP	G	6	Y	6	7.5	4.6	46.0	40.9
38	SB	AST SPP	F	6	Y	0.5	0.5	0.3	3.0	2.7
38	SB	HAP ACA	F	6	Y	5	8.0	4.7	47.0	41.8
38	SB	HAP NUT	F	6	Y	8	8.0	4.6	46.0	40.9
38	SB	HYM ACA	F	6	Y	1	4.0	1.6	16.0	14.2
38	SB	PHY FLO	F	6	Y	0.5	0.5	0.3	3.0	2.7
38	SB	POA SPP	G	6	Y	6	7.0	3.8	38.0	33.8
38	SB	AGR SPP	G	7	N	6	8.0	4.9	48.5	43.2
38	SB	HAP NUT	F	7	N	2.5	3.3	2.0	20.1	17.9
38	SB	PEN CAE	F	7	N	3.5	4.6	2.8	28.2	25.1
38	SB	PHL LON	F	7	N	0.5	0.7	0.4	4.0	3.6
38	SB	POA SPP	G	7	N	7	9.3	5.6	56.4	50.2
38	SB	SEN MUL	F	7	N	0.5	0.7	0.4	4.0	3.6
38	SB	AGR SPP	G	8	N	5	6.7	4.0	40.4	36.0
38	SB	HET VIL	F	8	N	3	4.0	2.4	24.1	21.5
38	SB	IPO AGG	F	8	N	0.5	0.7	0.4	4.0	3.6
38	SB	PEN CAE	F	8	N	3.5	4.6	2.8	28.2	25.1
38	SB	PHL LON	F	8	N	1.5	2.0	1.2	12.1	10.8
38	SB	POA SPP	G	8	N	10	13.2	8.1	80.6	71.7
38	SB	AGR SPP	G	9	Y	3.5	4.0	2.3	23.0	20.5
38	SB	AST SPP	F	9	Y	0.5	1.0	0.9	9.0	8.0
38	SB	HAP ACA	F	9	Y	2.5	4.0	2.0	20.0	17.8
38	SB	HAP NUT	F	9	Y	40	39.0	19.6	196	174
38	SB	HET VIL	F	9	Y	1.5	1.0	0.5	5.0	4.4
38	SB	IPO AGG	F	9	Y	0.5	0.5	0.3	3.0	2.7
38	SB	PEN CAE	F	9	Y	2.5	8.0	4.1	41.0	36.5
38	SB	PHL LON	F	9	Y	0.5	0.5	0.3	3.0	2.7
38	SB	PHY FLO	F	9	Y	0.5	0.5	0.3	3.0	2.7
38	SB	POA SPP	G	9	Y	1	0.5	0.4	4.0	3.6
38	SB	SEN MUL	F	9	Y	1	0.5	0.5	5.0	4.4
38	SB	AGR SPP	G	10	Y	2	2.0	1.0	10.0	8.9
38	SB	AST SPP	F	10	Y	1	1.5	0.7	7.0	6.2
38	SB	CRY SER	F	10	Y	1	1.5	1.1	11.0	9.8
38	SB	HAP NUT	F	10	Y	18	17.5	9.3	93.0	82.8
38	SB	KOE CRI	G	10	Y	1	1.5	0.7	7.0	6.2

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
38	SB	PEN CAE	F	10	Y	7	9.0	4.3	43.0	38.3
38	SB	PHL LON	F	10	Y	1	1.0	0.4	4.0	3.6
38	SB	POA SPP	G	10	Y	6	5.5	2.6	26.0	23.1
38	SB	UNK COM	F	10	Y	2	5.0	2.5	25.0	22.2
39	SB	AGR SPP	G	1	Y	6	10.0	6.3	63.0	56.1
39	SB	AST DIV	F	1	Y	4	4.5	2.6	26.0	23.1
39	SB	CAR SPP	G	1	Y	2	2.5	2.0	20.0	17.8
39	SB	PHL LON	F	1	Y	0.5	0.0	0.5	5.0	4.4
39	SB	POA SPP	G	1	Y	2	3.5	3.0	30.0	26.7
39	SB	SPH COC	F	1	Y	0.5	0.5	0.7	7.0	6.2
39	SB	AGR SPP	G	2	Y	9	10.0	6.7	67.0	59.6
39	SB	LUP ARG	F	2	Y	40	37.0	35.5	355	316
39	SB	PHL LON	F	2	Y	0.5	0.5	0.7	7.0	6.2
39	SB	POA SPP	G	2	Y	3	5.0	4.5	45.0	40.0
39	SB	AGR SPP	G	3	N	4	5.4	3.2	32.3	28.8
39	SB	AST DIV	F	3	N	2.5	3.3	2.0	20.2	18.0
39	SB	COM UMB	F	3	N	3	4.0	2.4	24.3	21.6
39	SB	PHL LON	F	3	N	0.5	0.7	0.4	4.0	3.6
39	SB	POA SPP	G	3	N	5	6.6	4.0	40.3	35.9
39	SB	UNK SPP	F	3	N	1	1.3	0.8	8.1	7.2
39	SB	AGO SPP	F	4	N	1	1.3	0.8	8.0	7.1
39	SB	AGR SPP	G	4	N	2.5	3.4	2.0	20.2	18.0
39	SB	LUP ARG	F	4	N	45	59.6	36.2	362	322
39	SB	ORY HYM	G	4	N	2	2.6	1.6	16.1	14.4
39	SB	PHL LON	F	4	N	2	2.6	1.6	16.2	14.4
39	SB	POA SPP	G	4	N	1.5	2.0	1.2	12.1	10.8
39	SB	SPH COC	F	4	N	1.5	2.0	1.2	12.1	10.7
39	SB	AGR SPP	G	5	N	9	12.1	7.3	72.8	64.8
39	SB	BRO TEC	G	5	N	0.5	0.7	0.4	4.1	3.6
39	SB	COM UMB	F	5	N	4	5.4	3.2	32.4	28.9
39	SB	LUP ARG	F	5	N	20	26.5	16.1	161	143
39	SB	PHL LON	F	5	N	0.5	0.7	0.4	4.0	3.6
39	SB	POA SPP	G	5	N	2	2.6	1.6	16.1	14.3
39	SB	AGR SPP	G	6	N	3	4.0	2.4	24.3	21.6
39	SB	AST DIV	F	6	N	1	1.3	0.8	8.1	7.2
39	SB	BRO TEC	G	6	N	0.5	0.7	0.4	4.1	3.6
39	SB	KOE CRI	G	6	N	4.5	6.0	3.6	36.2	32.2
39	SB	LIN LEW	F	6	N	2.5	3.3	2.0	20.1	17.9
39	SB	LUP ARG	F	6	N	1	1.3	0.8	8.1	7.2
39	SB	PHL LON	F	6	N	1.5	2.0	1.2	12.1	10.8
39	SB	POA SPP	G	6	N	2	2.6	1.6	16.1	14.3
39	SB	AGO SPP	F	7	Y	0.5	0.0	0.7	7.0	6.2
39	SB	AGR SPP	G	7	Y	10	11.0	6.7	67.0	59.6
39	SB	AST DIV	F	7	Y	0.5	0.5	0.4	4.0	3.6
39	SB	BRO TEC	G	7	Y	0.1	0.0	0.3	3.0	2.7
39	SB	COM UMB	F	7	Y	3.5	5.0	2.4	24.0	21.4
39	SB	PHL LON	F	7	Y	0.5	1.0	1.3	13.0	11.6
39	SB	POA SPP	G	7	Y	3	5.0	3.3	33.0	29.4
39	SB	AST DIV	F	8	N	2.5	3.3	2.0	20.2	18.0
39	SB	COM UMB	F	8	N	1.5	2.0	1.2	12.2	10.8

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

TRAN SECT	VEG TYPE	SPECIES CODE	GROWTH FORM	PLOT	PLOT TYPE	EST WT.	GREEN WT.	DRY WT.	PRODUCTION KG/HA	PRODUCTION LBS/A
39	SB	CRY SER	F	8	N	1	1.3	0.8	8.1	7.2
39	SB	PHL LON	F	8	N	1	1.3	0.8	8.1	7.2
39	SB	POA SPP	G	8	N	3	4.0	2.4	24.2	21.5
39	SB	SEN SPP	F	8	N	0.5	0.7	0.4	4.0	3.6
39	SB	UNK SPP	F	8	N	0.5	0.7	0.4	4.0	3.6
39	SB	AGR SPP	G	9	Y	7	9.5	6.5	65.0	57.8
39	SB	AST DIV	F	9	Y	1.5	3.0	2.0	20.0	17.8
39	SB	CHA DOU	F	9	Y	0.5	0.0	0.5	5.0	4.4
39	SB	COM UMB	F	9	Y	5	9.5	5.1	51.0	45.4
39	SB	MAC PAT	F	9	Y	1	0.5	0.7	7.0	6.2
39	SB	POA SPP	G	9	Y	3	5.0	3.4	34.0	30.3
39	SB	UNK COM	F	9	Y	1.5	0.5	0.8	8.0	7.1
39	SB	BRO TEC	G	10	Y	0.1	0.0	0.6	6.0	5.3
39	SB	CHA DOU	F	10	Y	0.1	0.0	0.3	3.0	2.7
39	SB	COM UMB	F	10	Y	11	19.5	9.9	99.0	88.1
39	SB	PHL LON	F	10	Y	0.1	0.0	0.4	4.0	3.6
40	PJ	CAR SPP	G	1	Y	2	2.0	1.4	14.0	12.5
40	PJ	ORY HYM	G	1	Y	1	0.5	0.6	6.0	5.3
40	PJ	AGR SPP	G	2	Y	3.5	4.5	2.3	23.0	20.5
40	PJ	ARE FEN	F	2	Y	1	1.0	1.0	10.0	8.9
40	PJ	CRY SER	F	2	Y	0.5	0.5	0.7	7.0	6.2
40	PJ	ORY HYM	G	2	Y	5	0.5	0.8	8.0	7.1
40	PJ	PHY FLO	F	2	Y	0.5	1.0	1.0	10.0	8.9
40	PJ	ARE FEN	F	3	Y	0.5	0.0	0.5	5.0	4.4
40	PJ	CAR SPP	G	3	Y	1	0.5	0.9	9.0	8.0
40	PJ	CRY SER	F	3	Y	2	4.5	3.0	30.0	26.7
40	PJ	POA SPP	G	3	Y	0.5	0.5	1.1	11.0	9.8
40	PJ	AGR SPP	G	4	N	3	4.0	2.4	23.7	21.1
40	PJ	ORY HYM	G	4	N	2	2.7	1.6	16.2	14.4
40	PJ	POA SPP	G	4	N	0.5	0.7	0.4	4.0	3.6
40	PJ	AGR SPP	G	5	N	3.5	4.7	2.8	27.6	24.6
40	PJ	CAR SPP	G	5	N	1	1.3	0.8	8.1	7.2
40	PJ	LIN LEW	F	5	N	0.5	0.7	0.4	4.1	3.6
40	PJ	ORY HYM	G	5	N	0.5	0.7	0.4	4.1	3.6
40	PJ	PHY FLO	F	5	N	0.5	0.7	0.4	4.1	3.6
40	PJ	CAR SPP	G	6	N	0.5	0.7	0.4	4.0	3.6
40	PJ	POA SPP	G	6	N	3	3.9	2.4	24.1	21.4
40	PJ	BRO TEC	G	7	Y	0.1	0.0	0.6	6.0	5.3
40	PJ	CRU SPP	F	7	Y	2	2.5	2.9	29.0	25.8
40	PJ	POA SPP	G	7	Y	2.5	3.0	2.8	28.0	24.9
40	PJ	AGR SPP	G	8	N	0.5	0.7	0.4	3.9	3.5
40	PJ	CAR SPP	G	8	N	0.5	0.7	0.4	4.0	3.6
40	PJ	POA SPP	G	8	N	9	11.8	7.2	72.3	64.3
40	PJ	AGR SPP	G	9	N	0.5	0.7	0.4	3.9	3.5
40	PJ	POA SPP	G	9	N	1	1.3	0.8	8.0	7.1
40	PJ	AGR SPP	G	10	Y	1	1.0	0.9	9.0	8.0
40	PJ	CAR SPP	G	10	Y	1	2.5	2.3	23.0	20.5
40	PJ	ORY HYM	G	10	Y	0.5	1.5	1.0	10.0	8.9
40	PJ	POA SPP	G	10	Y	0.5	0.5	0.5	5.0	4.4

APPENDIX 3-1.4

Analyses for Range Productivity and Utilization Data

Results of a one-way ANOVA comparing range productivity by growth form within vegetation types using 1980 data (analyses correspond to those summarized on Table 3-5).

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	1 2 3 4 31 32 33 34 35 36

NUMBER OF OBSERVATIONS IN BY GROUP = 184

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	16886.57740246	1876.28637805	1.75	0.0812	0.082883	133.1738
ERROR	174	186854.12486616	1073.87428084		STD DEV		KG HA MEAN
CORRECTED TOTAL	183	203740.70226861			32.77002107		24.60695799

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	16886.57740246	1.75	0.0812

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	1 2 3 4 31 32 33 34 35 36

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	96012.76021441	10668.08446827	2.38	0.0144	0.105331	198.4313
ERROR	182	815524.69291058	4480.90490610		STD DEV		KG HA MEAN
CORRECTED TOTAL	191	911537.45312499			66.93956159		33.73437500

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	96012.76021441	2.38	0.0144

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	1 2 3 4 31 32 33 34 35 36

NUMBER OF OBSERVATIONS IN BY GROUP = 118

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	16940.64877879	1882.29430875	1.50	0.1575	0.110914	75.0624
ERROR	108	135796.37766390	1257.37386726		STD DEV		KG HA MEAN
CORRECTED TOTAL	117	152737.02644269			35.45946795		47.24001529

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	16940.64877879	1.50	0.1575

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	1 2 3 4 31 32 33 34 35 36

NUMBER OF OBSERVATIONS IN BY GROUP = 128

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=MIXED BRUSH GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	94685.36253603	10520.59583734	2.24	0.0241	0.145772	112.5724
ERROR	118	554856.69215147	4702.17535722		STD DEV		KG HA MEAN
CORRECTED TOTAL	127	649542.05468750			68.57240959		60.91406250

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	94685.36253603	2.24	0.0241

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	5 6 7 11 12 16 17 19 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 58

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	47675.25008970	5297.25000997	3.12	0.0049	0.369144	157.2243
ERROR	48	81475.45323115	1697.40527565		STD DEV		KG HA MEAN
CORRECTED TOTAL	57	129150.70332085			41.19957859		26.20433891

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	47675.25008970	3.12	0.0049

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	5 6 7 11 12 16 17 19 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 61

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	117024.52641166	13002.72515685	4.62	0.0002	0.449073	218.2379
ERROR	51	143566.55555556	2815.03050109		STD DEV		KG HA MEAN
CORRECTED TOTAL	60	260591.08196721			53.05686102		24.31147541

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	117024.52641166	4.62	0.0002

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	5 6 7 11 12 16 17 19 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 79

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	6644.90488528	738.32276503	1.72	0.1011	0.182997	90.9253
ERROR	69	29666.61923602	429.95100342		STD DEV		KG HA MEAN
CORRECTED TOTAL	78	36311.52412130			20.73525991		22.80471506

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	6644.90488528	1.72	0.1011

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	5 6 7 11 12 16 17 19 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 88

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	15556.87723665	1728.54191518	3.52	0.0011	0.288585	89.8797
ERROR	78	38350.56594517	491.67392237		STD DEV		KG HA MEAN
CORRECTED TOTAL	87	53907.44318182			22.17372144		24.67045455

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	15556.87723665	3.52	0.0011

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	9	8 10 15 20 22 28 30 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 94

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	8	6674.58586338	834.32323292	0.48	0.8644	0.043577	211.3551
ERROR	85	146494.40203775	1723.46355339		STD DEV		KG HA MEAN
CORRECTED TOTAL	93	153168.98790113			41.51461855		19.64211811

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	8	6674.58586338	0.48	0.8644

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	8 10 14 15 20 22 28 30 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 102

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	16744.19860675	1860.46651186	0.68	0.7291	0.062107	176.9497
ERROR	92	252857.64453051	2748.45265794		STD DEV		KG HA MEAN
CORRECTED TOTAL	101	269601.84313725			52.42568700		29.62745098

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	16744.19860675	0.68	0.7291

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	8 10 14 15 20 22 28 30 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 121

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES PLT TYPE=UNCAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	9	16217.95715010	1801.99523890	1.11	0.3585	0.082870	103.7204
ERROR	111	179485.66937673	1616.98801240		STD DEV		KG HA MEAN
CORRECTED TOTAL	120	195703.62652683			40.21178947		38.76940045

SOURCE	DF	TYPE I SS	F VALUE	PR > F
TRANSECT	9	16217.95715010	1.11	0.3585

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
TRANSECT	10	8 10 14 15 20 22 28 30 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 124

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE - 1980

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES PLT TYPE=CAGED

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR) F	R-SQUARE	C.V.
MODEL	9	194113.93775310	21568.21530590	3.13	0.0022	0.198190	133.8689
ERROR	114	785322.06224690	6888.79001971		STD DEV		KG HA MEAN
CORRECTED TOTAL	123	979435.99999999			82.99873505		62.00000000

SOURCE	DF	TYPE I SS	F VALUE	PR) F
TRANSECT	9	194113.93775310	3.13	0.0022

Results of a two-way ANOVA comparing range productivity by growth form for 1978 through 1980 (analyses correspond to those summarized on Table 3-8).

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=MIXED BRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 998

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 995 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=MIXED BRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	10050.42330716	2010.08466143	0.69	0.6321	0.003486	178.6946
ERROR	989	2872932.81215750	2904.88656437		STD DEV		KG HA MEAN
CORRECTED TOTAL	994	2882983.23546466			53.89699959		30.16150886

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1763.46963093	0.30	0.7383
PLT TYPE	1	2345.39982794	0.81	0.3691
YEAR*PLT TYPE	2	5941.55384829	1.02	0.3600

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=MIXED BRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 705

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 703 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=MIXED BRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	94105.29804628	18821.05960926	4.56	0.0005	0.031655	136.8539
ERROR	697	2878701.00269103	4130.13056340		STD DEV		KG HA MEAN
CORRECTED TOTAL	702	2972806.30073731			64.26609186		46.95963468

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	52144.13652053	6.31	0.0019
PLT TYPE	1	37996.32462304	9.20	0.0025
YEAR*PLT TYPE	2	3964.83690271	0.48	0.6190

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 281

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	3755.29515037	751.05903007	0.34	0.8885	0.006148	216.1681
ERROR	275	607050.31593360	2207.45569430		STD DEV		KG HA MEAN
CORRECTED TOTAL	280	610805.61108397			46.98356834		21.73473648

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	2656.42258411	0.60	0.5486
PLT TYPE	1	90.03644911	0.04	0.8401
YEAR*PLT TYPE	2	1008.83611714	0.23	0.7959

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 442

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	11358.26336936	2271.65267387	5.25	0.0001	0.056806	105.0777
ERROR	436	188589.14268929	432.54390525		STD DEV		KG HA MEAN
CORRECTED TOTAL	441	199947.40605865			20.79768990		19.79267984

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	6074.25120836	7.02	0.0010
PLT TYPE	1	4079.03022764	9.43	0.0023
YEAR*PLT TYPE	2	1204.98193336	1.39	0.2495

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 475

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 474 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	9690.93146367	1938.18629273	0.69	0.6356	0.007291	212.5426
ERROR	468	1319492.16411227	2819.42770109		STD DEV		KG HA MEAN
CORRECTED TOTAL	473	1329183.09557594			53.09828341		24.98241588

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	3001.09604455	0.53	0.5877
PLT TYPE	1	5617.16695818	1.99	0.1588
YEAR*PLT TYPE	2	1072.66846094	0.19	0.8268

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
PLT TYPE	2	N Y

NUMBER OF OBSERVATIONS IN BY GROUP = 692

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 689 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES
1978 1979 1980

TWO-WAY ANALYSIS OF VARIANCE

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	132323.57217653	26464.71443531	7.69	0.0001	0.053296	136.9292
ERROR	683	2350461.60727239	3441.37863437		STD DEV		KG HA MEAN
CORRECTED TOTAL	688	2482785.17944892			58.66326478		42.84204496

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	67264.58713711	9.77	0.0001
PLT TYPE	1	59293.90641385	17.23	0.0001
YEAR*PLT TYPE	2	5765.07862557	0.84	0.4332

Results of a one-way ANOVA comparing range production within caged plots by vegetation type for 1978 through 1980 (analyses correspond to those summarized on Table 3-10).

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=MIXED BRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 549

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 546 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=MIXED BRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	1579.24998000	789.62499000	0.20	0.8191	0.000735	199.2413
ERROR	543	2148462.09004617	3956.65209953		STD DEV		KG HA MEAN
CORRECTED TOTAL	545	2150041.34002617			62.90192445		31.57073301

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1579.24998000	0.20	0.8191

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=MIXED BRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 367

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 365 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=MIXED BRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	38514.72747222	19257.36373611	2.89	0.0568	0.015722	151.0254
ERROR	362	2411268.26886523	6660.96206869		STD DEV		KG HA MEAN
CORRECTED TOTAL	364	2449782.99633745			81.61471723		54.04038787

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	38514.72747222	2.89	0.0568

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 155

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=PINYON-JUNIPER GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR) F	R-SQUARE	C.V.
MODEL	2	1216.45006220	608.22503110	0.23	0.7970	0.002981	245.9885
ERROR	152	406907.54753178	2677.02333902		STD DEV		KG HA MEAN
CORRECTED TOTAL	154	408123.99759398			51.73995882		21.03349040

SOURCE	DF	TYPE I SS	F VALUE	PR) F
YEAR	2	1216.45006220	0.23	0.7970

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 226

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=PINYON-JUNIPER GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	1810.99829467	905.49914733	1.49	0.2270	0.013212	108.3239
ERROR	223	135263.39507224	606.56230974		STD DEV		KG HA MEAN
CORRECTED TOTAL	225	137074.39336691			24.62848574		22.73597494

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1810.99829467	1.49	0.2270

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 254

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 253 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=UPLAND SAGEBRUSH GR FRM=FORBS

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	1117.59588099	558.79794050	0.23	0.7969	0.001814	175.4664
ERROR	250	614816.50305749	2459.26601223		STD DEV		KG HA MEAN
CORRECTED TOTAL	252	615934.09893848			49.59098721		28.26237954

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1117.59588099	0.23	0.7969

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80

NUMBER OF OBSERVATIONS IN BY GROUP = 363

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 360 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
RANGE PRODUCTIVITY AND UTILIZATION STUDIES

ONE-WAY ANALYSIS OF VARIANCE FOR CAGED PLOTS
BY VEGETATION TYPE AND GROWTH FORMS

VEG TYPE=UPLAND SAGEBRUSH GR FRM=GRASSES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: KG HA

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR) F	R-SQUARE	C.V.
MODEL	2	59707.66141594	29853.83070797	5.45	0.0047	0.029607	143.7357
ERROR	357	1956961.64377279	5481.68527667		STD DEV		KG HA MEAN
CORRECTED TOTAL	359	2016669.30518873			74.03840407		51.51011236

SOURCE	DF	TYPE I SS	F VALUE	PR) F
YEAR	2	59707.66141594	5.45	0.0047

APPENDIX 3-1.5

Analyses for Browse Utilization Data

Results of a two-way ANOVA comparing browse leader use (arcsine transformed percent data) from 1978 through 1980 (analyses correspond to those summarized on Table 3-19). Vegetation types which correspond to habitat abbreviations are mixed brush (MB), pinyon-juniper (PJ), and upland sagebrush (SB). Scientific names associated with species abbreviations are presented in Appendix 3-1.1.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	10	1 2 3 4 6 31 32 33 34 35

NUMBER OF OBSERVATIONS IN BY GROUP = 385

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 358 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	29	1.44478479	0.04982017	4.57	0.0001	0.287750	148.1025
ERROR	328	3.57618531	0.01090300		STD DEV		ASLU MEAN
CORRECTED TOTAL	357	5.02097010			0.10441745		0.07050350

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.23704861	10.87	0.0001
TRANSECT	9	0.71262890	7.26	0.0001
YEAR*TRANSECT	18	0.49510728	2.52	0.0007

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	7	1 2 3 4 32 33 34

NUMBER OF OBSERVATIONS IN BY GROUP = 182

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 165 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	20	1.59462942	0.07973147	1.96	0.0126	0.213793	315.1520
ERROR	144	5.86414023	0.04072320		STD DEV		ASLU MEAN
CORRECTED TOTAL	164	7.45876965			0.20179989		0.06403255

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.01430710	0.18	0.8391
TRANSECT	6	0.80094300	3.28	0.0047
YEAR*TRANSECT	12	0.77937932	1.59	0.0991

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=CER MON

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	2	6 35

NUMBER OF OBSERVATIONS IN BY GROUP = 42

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 38 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=CER MON

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	1.13460549	0.22692110	3.16	0.0199	0.330258	107.1473
ERROR	32	2.30090215	0.07190319		STD DEV		ASLU MEAN
CORRECTED TOTAL	37	3.43550764			0.26814771		0.25026072

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.50771068	3.53	0.0412
TRANSECT	1	0.49730953	6.92	0.0130
YEAR*TRANSECT	2	0.12958527	0.90	0.4162

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	4	1 4 6 35

NUMBER OF OBSERVATIONS IN BY GROUP = 18

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	11	0.08796567	0.00799688	0.66	0.7376	0.548700	201.7383
ERROR	6	0.07235085	0.01205847		STD DEV		ASLU MEAN
CORRECTED TOTAL	17	0.16031652			0.10981109		0.05443245

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.00898318	0.37	0.7039
TRANSECT	3	0.06091289	1.68	0.2685
YEAR*TRANSECT	6	0.01806959	0.25	0.9422

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	9	1 2 3 4 6 32 33 34 35

NUMBER OF OBSERVATIONS IN BY GROUP = 122

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 115 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=MB SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	26	1.33259930	0.05125382	4.77	0.0001	0.585027	411.8233
ERROR	88	0.94524375	0.01074141		STD DEV		ASLU MEAN
CORRECTED TOTAL	114	2.27784305			0.10364076		0.02516631

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.05196082	2.42	0.0949
TRANSECT	8	0.53660242	6.24	0.0001
YEAR*TRANSECT	16	0.74403606	4.33	0.0001

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	2	12 36

NUMBER OF OBSERVATIONS IN BY GROUP = 9

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 8 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	5	0.28038939	0.05607788	0.88	0.6065	0.688588	136.5882
ERROR	2	0.12680519	0.06340260		STD DEV		ASLU MEAN
CORRECTED TOTAL	7	0.40719458			0.25179872		0.18434886

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.13673905	1.08	0.4812
TRANSECT	1	0.06770975	1.07	0.4100
YEAR*TRANSECT	2	0.07594059	0.60	0.6254

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	10	5 7 12 16 17 18 19 36 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 311

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 273 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	25	5.78790937	0.23151637	3.18	0.0001	0.243350	167.0412
ERROR	247	17.99636473	0.07285978		STD DEV		ASLU MEAN
CORRECTED TOTAL	272	23.78427410			0.26992550		0.16159217

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1.51474712	10.39	0.0001
TRANSECT	9	1.29345001	1.97	0.0428
YEAR*TRANSECT	14	2.97971224	2.92	0.0004

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=CER MON

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	3	12 16 17

NUMBER OF OBSERVATIONS IN BY GROUP = 51

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 49 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=CER MON

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	8	9.52737481	1.19092185	9.33	0.0001	0.650961	43.0436
ERROR	40	5.10847545	0.12771189		STD DEV		ASLU MEAN
CORRECTED TOTAL	48	14.63585026			0.35736800		0.83024677

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	8.86647588	34.71	0.0001
TRANSECT	2	0.56991022	2.23	0.1206
YEAR*TRANSECT	4	0.09098870	0.18	0.9484

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=JUN OST

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	11	5 7 11 12 16 17 18 19 36 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 121

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 92 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=JUN OST

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	29	0.01317256	0.00045423	1.01	0.4699	0.321261	745.7739
ERROR	62	0.02783011	0.00044887		STD DEV		ASLU MEAN
CORRECTED TOTAL	91	0.04100267			0.02118662		0.00284089

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.00103272	1.15	0.3232
TRANSECT	10	0.00412520	0.92	0.5219
YEAR*TRANSECT	17	0.00801463	1.05	0.4207

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	11	5 7 11 12 16 17 18 19 36 37 40

NUMBER OF OBSERVATIONS IN BY GROUP = 151

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 132 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	29	3.87971920	0.13378342	2.55	0.0003	0.420498	220.2090
ERROR	102	5.34675776	0.05241919		STD DEV		ASLU MEAN
CORRECTED TOTAL	131	9.22647695			0.22895238		0.10397050

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0.45106933	4.30	0.0161
TRANSECT	10	2.29318542	4.37	0.0001
YEAR*TRANSECT	17	1.13546445	1.27	0.2241

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=PUR TRI

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	7	11 12 16 17 18 19 37

NUMBER OF OBSERVATIONS IN BY GROUP = 95

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 85 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=PUR TRI

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	17	12.48043131	0.73414302	6.47	0.0001	0.621530	60.1797
ERROR	67	7.59974040	0.11342896		STD DEV		ASLU MEAN
CORRECTED TOTAL	84	20.08017171			0.33679216		0.55964415

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	9.35628653	41.24	0.0001
TRANSECT	6	1.67914886	2.47	0.0324
YEAR*TRANSECT	9	1.44499592	1.42	0.1988

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	1	16

NUMBER OF OBSERVATIONS IN BY GROUP = 12

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 10
OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=PJ SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	1.76752736	0.88376368	4.44	0.0569	0.559087	143.4913
ERROR	7	1.39392692	0.19913242		STD DEV		ASLU MEAN
CORRECTED TOTAL	9	3.16145428			0.44624255		0.31098925

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	1.76752736	4.44	0.0569
TRANSECT	0	0.00000000	.	.
YEAR*TRANSECT	0	0.00000000	.	.

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	5	8 20 22 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 33

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 30 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=AME UTA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR) F	R-SQUARE	C.V.
MODEL	14	0.34008245	0.02429160	0.89	0.5844	0.453535	275.1788
ERROR	15	0.40976544	0.02731770		STD DEV		ASLU MEAN
CORRECTED TOTAL	29	0.74984789			0.16528066		0.06006301

SOURCE	DF	TYPE I SS	F VALUE	PR) F
YEAR	2	0.09236988	1.69	0.2177
TRANSECT	4	0.13297760	1.22	0.3448
YEAR*TRANSECT	8	0.11473497	0.53	0.8200

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	10	8 10 14 15 20 22 28 30 38 39

NUMBER OF OBSERVATIONS IN BY GROUP = 704

NOTE: ALL DEPENDENT VARIABLES ARE CONSISTENT WITH RESPECT TO THE PRESENCE OR ABSENCE OF MISSING VALUES. HOWEVER, ONLY 541 OBSERVATIONS IN BY GROUP CAN BE USED IN THIS ANALYSIS.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=ART TRI

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	29	17.69561639	0.61019367	15.72	0.0001	0.471480	164.4739
ERROR	511	19.83647653	0.03881894		STD DEV		ASLU MEAN
CORRECTED TOTAL	540	37.53209292			0.19702522		0.11979120

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	9.17167537	118.13	0.0001
TRANSECT	9	3.18977967	9.13	0.0001
YEAR*TRANSECT	18	5.33416135	7.63	0.0001

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	1	80
TRANSECT	1	22

NUMBER OF OBSERVATIONS IN BY GROUP = 1

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=PIN EDU

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	0	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	0	0	0		STD DEV		ASLU MEAN
CORRECTED TOTAL	0	0			0		0

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	0	0	.	.
TRANSECT	0	0	.	.
YEAR*TRANSECT	0	0	.	.

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	3	78 79 80
TRANSECT	1	8

NUMBER OF OBSERVATIONS IN BY GROUP = 12

RIO BLANCO OIL SHALE COMPANY
BROWSE CONDITION AND UTILIZATION STUDIES

TWO-WAY ANALYSIS OF VARIANCE FOR BROWSE UTILIZATION

HABITAT=SB SPECIES=SYM ORE

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: ASLU

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	2	0	0	99999.99	0.0000	0.000000	99999.9999
ERROR	9	0	0		STD DEV		ASLU MEAN
CORRECTED TOTAL	11	0			0		0

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	2	0	.	.
TRANSECT	0	0	.	.
YEAR*TRANSECT	0	0	.	.

Winter Distribution of Deer Pellet Groups by Slope in 1978, 1979 and 1980 in the RBOSC Study Area

Block		Slope in Degrees from Horizontal																				
		0 Degrees			10 Degrees			20 Degrees			30 Degrees			40 Degrees			50 Degrees			Total		
		1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980
1	No./Plots in Category		3			55			38			20			9			15			140	
	Pellet Groups Counted	0	0	0	21	29	13	23	20	18	18	10	4	3	7	0	5	3	1	70	69	36
2	No./Plots in Category		16			105			14			4			1			0			140	
	Pellet Groups Counted	6	9	4	42	52	25	3	17	3	1	2	1	0	0	0	-	-	-	52	80	35
3	No./Plots in Category		6			120			6			1			3			4			140	
	Pellet Groups Counted	0	3	1	60	24	21	3	4	2	0	0	0	6	4	0	1	2	1	70	37	25
4	No./Plots in Category		1			55			35			27			14			8			140	
	Pellet Groups Counted	1	0	0	13	9	6	17	4	10	14	8	11	2	10	2	1	0	2	48	31	31
5	No./Plots in Category		20			78			24			11			6			1			140	
	Pellet Groups Counted	11	18	6	70	38	31	24	17	15	4	4	2	2	3	0	0	0	0	111	80	54
6	No./Plots in Category		1			93			24			19			0			3			140	
	Pellet Groups Counted	1	1	1	46	35	34	17	15	10	7	10	9	-	-	-	0	0	0	71	61	54
7	No./Plots in Category		2			41			18			34			21			24			140	
	Pellet Groups Counted	0	1	0	17	5	5	13	9	1	5	5	1	5	2	3	3	5	2	43	27	12
8	No./Plots in Category		4			90			17			10			13			6			140	
	Pellet Groups Counted	0	0	1	29	25	18	2	1	4	2	1	0	1	1	0	0	0	0	34	28	23
9	No./Plots in Category		7			79			30			9			8			7			140	
	Pellet Groups Counted	0	0	1	6	10	10	2	5	2	1	3	1	1	1	1	0	1	0	10	20	15
Total	No./Plots in Category		60			716			206			135			75			68			1260	
	Pellet Groups Counted	19	32	14	299	227	163	104	92	65	52	43	29	20	28	6	15	11	6	509	433	283

Winter Distribution of Deer Pellet Groups by Elevation in 1978, 1979 and 1980 in the RBOSC Study Area

Block		Elevation in Feet Above MSL																	
		6000			6500			7000			7500			8000			TOTAL		
		1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980
1	No. of Plots in Block		0			0			67			64			9			140	
	Pellet Groups Counted	-	-	-	-	-	-	27	38	24	39	29	12	4	2	0	70	69	36
2	No. of Plots in Block		0			87			53			0			0			140	
	Pellet Groups Counted	-	-	-	25	43	12	27	37	21	-	-	-	-	-	-	52	80	33
3	No. of Plots in Block		8			132			0			0			0			140	
	Pellet Groups Counted	1	4	3	69	33	22	-	-	-	-	-	-	-	-	-	70	37	25
4	No. of Plots in Block		0			0			18			100			22			140	
	Pellet Groups Counted	-	-	-	-	-	-	4	6	2	39	23	27	5	2	2	49	31	31
5	No. of Plots in Block		0			38			102			0			0			140	
	Pellet Groups Counted	-	-	-	30	30	12	81	50	42	-	-	-	-	-	-	111	80	54
6	No. of Plots in Block		0			140			0			0			0			140	
	Pellet Groups Counted	-	-	-	71	61	54	-	-	-	-	-	-	-	-	-	71	61	54
7	No. of Plots in Block		0			0			12			103			25			140	
	Pellet Groups Counted	-	-	-	-	-	-	3	1	1	36	18	11	4	8	0	43	27	12
8	No. of Plots in Block		0			11			129			0			0			140	
	Pellet Groups Counted	-	-	-	2	2	0	32	26	23	-	-	-	-	-	-	34	28	23
9	No. of Plots in Block		0			84			56			0			0			140	
	Pellet Groups Counted	-	-	-	5	14	7	5	6	8	-	-	-	-	-	-	10	20	15
Total	No. of Plots in Block		8			492			437			267			56			1260	
	Pellet Groups Counted	1	4	3	202	183	107	179	164	121	114	70	50	13	12	2	509	433	283

Winter Distribution of Deer Pellet Groups by Habitat in 1978, 1979 and 1980 in the RBOSC Study Area

Block		Habitat																				
		Mixed Brush			Mixed Brush Pinyon-Juniper			Other Type			Pinyon-Juniper			Sagebrush			Sagebrush Pinyon-Juniper			Total		
		1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980
1	No./Plots in Category		86			30			7			0			12			5			140	
	Pellet Groups Counted	57	36	23	7	18	8	2	1	0	-	-	-	1	10	5	3	4	0	70	69	36
2	No./Plots in Category		1			29			0			44			28			38			140	
	Pellet Groups Counted	0	0	0	9	35	10	-	-	-	11	19	7	11	9	8	21	17	8	52	80	33
3	No./Plots in Category		1			9			0			10			85			35			140	
	Pellet Groups Counted	0	0	1	12	12	5	-	-	-	1	2	2	43	17	12	14	6	5	70	37	25
4	No./Plots in Category		94			10			17			5			9			5			140	
	Pellet Groups Counted	44	20	25	2	2	1	0	0	0	0	2	0	1	6	5	1	1	0	48	31	31
5	No./Plots in Category		28			29			2			9			31			41			140	
	Pellet Groups Counted	26	27	15	16	25	14	3	1	0	2	0	1	24	18	17	40	9	7	111	80	54
6	No./Plots in Category		2			63			2			25			12			36			140	
	Pellet Groups Counted	5	1	2	33	35	30	1	0	0	8	4	1	6	8	5	18	13	16	71	61	54
7	No./Plots in Category		118			3			16			0			3			0			140	
	Pellet Groups Counted	41	26	10	0	0	0	1	1	2	-	-	-	1	0	0	-	-	-	43	27	12
8	No./Plots in Category		29			39			5			5			41			21			140	
	Pellet Groups Counted	5	7	10	6	9	3	1	2	1	0	1	0	20	9	9	2	0	0	34	28	23
9	No./Plots in Category		5			61			0			12			32			30			140	
	Pellet Groups Counted	1	0	0	7	14	5	-	-	-	0	1	0	0	3	8	2	2	2	10	20	15
Total	No./Plots in Category		364			273			49			110			253			211			1260	
	Pellet Groups Counted	179	117	86	92	150	76	8	5	3	22	29	11	107	80	69	101	52	38	509	433	283

Winter Distribution of Deer Pellet Groups by Aspect in 1978, 1979 and 1980 in the RBOSF Study Area

Block		ASPECT East			North			Northeast			Northwest			South			Southeast			Southwest			West			Zero (0)			Total		
		1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980	1978	1979	1980
1	No./Plots in Category		13			24			10			8			28			23			14			10			10			140		
	Pellet Groups Counted	7	8	3	10	9	6	8	3	0	8	7	3	14	23	10	12	7	11	6	8	2	2	3	0	3	1	1	70	69	36
2	No./Plots in Category		18			56			11			14			6			15			3			1			16			140		
	Pellet Groups Counted	5	18	6	23	19	11	4	4	6	9	19	3	0	2	1	6	9	3	0	3	0	0	1	0	5	5	3	52	80	33
3	No./Plots in Category		4			22			3			14			12			12			8			5			60			140		
	Pellet Groups Counted	2	3	0	16	5	3	0	0	0	11	3	4	8	4	0	3	4	2	3	0	3	2	0	1	25	18	12	70	37	25
4	No./Plots in Category		25			23			0			3			36			23			16			7			7			140		
	Pellet Groups Counted	13	15	11	4	2	5	-	-	-	2	1	0	7	6	4	16	6	9	3	0	1	0	1	0	3	0	1	48	31	31
5	No./Plots in Category		13			49			8			4			24			9			2			9			22			140		
	Pellet Groups Counted	7	8	7	59	35	26	12	6	2	1	4	2	8	9	8	4	1	2	0	0	0	6	4	3	14	13	4	111	80	54
6	No./Plots in Category		28			26			4			16			7			19			6			7			27			140		
	Pellet Groups Counted	14	12	7	24	14	16	4	2	1	3	13	10	1	1	2	13	5	6	4	3	2	1	0	0	7	11	10	71	61	54
7	No./Plots in Category		10			20			12			36			8			28			6			6			14			140		
	Pellet Groups Counted	0	4	1	12	4	2	2	1	0	12	6	3	1	0	0	7	9	4	0	1	1	0	0	0	9	2	1	43	27	12
8	No./Plots in Category		18			34			3			11			16			36			5			4			13			140		
	Pellet Groups Counted	5	1	0	18	8	6	0	1	0	0	3	1	1	2	5	7	11	6	1	0	1	0	0	0	2	2	4	34	28	23
9	No./Plots in Category		14			26			17			32			9			4			13			11			14			140		
	Pellet Groups Counted	0	6	2	2	2	2	2	5	3	3	4	4	1	1	1	0	0	0	0	1	0	2	0	0	0	1	3	10	20	15
Total	No./Plots in Category		143			280			68			138			146			169			73			60			183			1260		
	Pellet Groups Counted	53	75	37	168	98	77	32	22	12	49	60	30	41	48	31	68	52	43	17	16	10	13	9	4	68	53	39	509	433	283

APPENDIX 3-2.4

Winter Distribution of Mule Deer Pellet Groups in the RBOSC Study Area for 1978, 1979 and 1980 by Block and Plots Categorized by Elevation, Slope, Aspect, and Habitat

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
9	35	PO	91980	7000	10	NW	SB	1	1	0
9	35	PO	91980	7000	10	NW	SP	1	2	0
9	35	PO	91980	7000	50	S	MP	1	3	0
9	35	PO	91980	7000	10	W	MP	1	4	0
9	35	PO	91980	7000	20	W	MP	1	5	0
9	35	PO	91980	7000	10	SW	MP	1	6	0
9	35	PO	91980	7000	10	W	PJ	1	7	0
9	35	PO	91980	7000	10	W	PJ	1	8	0
9	35	PO	91980	7000	10	SE	MP	1	9	0
9	35	PO	91980	7000	10	NW	PJ	1	10	0
9	35	PO	91980	7000	10	0	SP	2	1	0
9	35	PO	91980	7000	30	NE	SP	2	2	1
9	35	PO	91980	7000	30	NE	SP	2	3	0
9	35	PO	91980	7000	20	NE	SB	2	4	0
9	35	PO	91980	7000	10	N	SB	2	5	0
9	35	PO	91980	6500	10	NE	SP	2	6	0
9	35	PO	91980	6500	20	NE	SP	2	7	0
9	35	PO	91980	7000	40	SW	MP	2	8	0
9	35	PO	91980	7000	40	SW	MP	2	9	0
9	35	PO	91980	7000	20	N	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
9	21	WJ	91880	6500	50	S	MB	1	1	0
9	21	WJ	91880	7000	50	SW	MP	1	2	0
9	21	WJ	91880	7000	40	S	MP	1	3	0
9	21	WJ	91880	7000	10	S	MP	1	4	0
9	21	WJ	91880	7000	10	0	SB	1	5	0
9	21	WJ	91880	7000	10	0	SP	1	6	0
9	21	WJ	91880	7000	10	NW	SB	1	7	0
9	21	WJ	91880	7000	10	W	SB	1	8	0
9	21	WJ	91880	7000	10	0	SB	1	9	0
9	21	WJ	91880	7000	10	NW	SB	1	10	0
9	21	WJ	91880	6500	50	E	MP	2	1	0
9	21	WJ	91880	6500	50	E	MP	2	2	0
9	21	WJ	91880	7000	40	SE	MP	2	3	0
9	21	WJ	91880	7000	30	S	MP	2	4	0
9	21	WJ	91880	7000	30	SE	MP	2	5	0
9	21	WJ	91880	7000	10	N	SP	2	6	0
9	21	WJ	91880	7000	10	NW	SP	2	7	0
9	21	WJ	91880	7000	10	NW	SB	2	8	0
9	21	WJ	91880	7000	10	NW	SB	2	9	0
9	21	WJ	91880	7000	10	NW	SB	2	10	0
9	30	DA	91980	7000	10	NW	MP	1	1	0
9	30	DA	91980	6500	10	N	MP	1	2	0
9	30	DA	91980	6500	40	S	PJ	1	3	0
9	30	DA	91980	6500	10	S	MP	1	4	0
9	30	DA	91980	7000	0	0	MP	1	5	0
9	30	DA	91980	7000	10	N	MP	1	6	0
9	30	DA	91980	7000	0	0	MP	1	7	0
9	30	DA	91980	7000	10	NE	MP	1	8	0
9	30	DA	91980	7000	10	NE	SP	1	9	0
9	30	DA	91980	7000	0	0	SP	1	10	0
9	30	DA	91980	7000	10	NW	MP	2	1	0
9	30	DA	91980	7000	10	NW	MP	2	2	0
9	30	DA	91980	7000	20	NW	MP	2	3	0
9	30	DA	91980	7000	10	SW	MP	2	4	0
9	30	DA	91980	7000	0	0	PJ	2	5	0
9	30	DA	91980	7000	10	N	PJ	2	6	0
9	30	DA	91980	7000	10	N	MP	2	7	0
9	30	DA	91980	6500	40	W	MB	2	8	0
9	30	DA	91980	6500	10	N	MP	2	9	0
9	30	DA	91980	7000	20	SW	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
9	9	BJ	91780	6500	10	SW	SP	1	1	0
9	9	BJ	91780	6500	10	NE	SP	1	2	0
9	9	BJ	91780	6500	10	NE	SP	1	3	0
9	9	BJ	91780	6500	10	SW	SB	1	4	0
9	9	BJ	91780	6500	10	0	SB	1	5	0
9	9	BJ	91780	6500	20	SE	SB	1	6	0
9	9	BJ	91780	6500	50	E	MP	1	7	0
9	9	BJ	91780	6500	10	E	MP	1	8	0
9	9	BJ	91780	6500	10	E	MP	1	9	0
9	9	BJ	91780	6500	10	NE	MP	1	10	0
9	9	BJ	91780	6500	10	SW	SP	2	1	0
9	9	BJ	91780	6500	10	SW	MP	2	2	0
9	9	BJ	91780	6500	20	SW	SP	2	3	0
9	9	BJ	91780	6500	30	NW	MP	2	4	0
9	9	BJ	91780	6500	50	SW	MP	2	5	0
9	9	BJ	91780	6500	30	NW	MP	2	6	0
9	9	BJ	91780	6500	10	NW	MP	2	7	0
9	9	BJ	91780	6500	20	N	MP	2	8	0
9	9	BJ	91780	6500	20	NW	MP	2	9	0
9	9	BJ	91780	6500	20	NW	MP	2	10	0
9	15	WJ	91880	7000	10	NW	SB	1	1	0
9	15	WJ	91880	6500	10	N	SB	1	2	0
9	15	WJ	91880	6500	10	N	SB	1	3	0
9	15	WJ	91880	6500	10	NW	SB	1	4	0
9	15	WJ	91880	6500	20	SW	MB	1	5	0
9	15	WJ	91280	6500	0	0	SB	1	6	0
9	15	WJ	91880	6500	0	0	SP	1	7	0
9	15	WJ	91880	6500	10	N	MB	1	8	0
9	15	WJ	91880	6500	10	NE	SP	1	9	0
9	15	WJ	91880	6500	10	N	MP	1	10	0
9	15	WJ	91880	7000	10	NW	SB	2	1	0
9	15	WJ	91880	7000	10	NW	SB	2	2	0
9	15	WJ	91880	7000	10	NW	SP	2	3	0
9	15	WJ	91880	7000	10	NW	SB	2	4	0
9	15	WJ	91880	7000	10	NW	SP	2	5	0
9	15	WJ	91880	6500	10	NW	SP	2	6	0
9	15	WJ	91880	6500	20	N	SP	2	7	0
9	15	WJ	91880	6500	20	N	SB	2	8	0
9	15	WJ	91880	6500	10	W	SB	2	9	0
9	15	WJ	91880	6500	10	W	SB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
9	3	BJ	91780	6500	10	E	PJ	1	1	0
9	3	BJ	91780	6500	10	0	PJ	1	2	0
9	3	BJ	91780	6500	10	NE	PJ	1	3	0
9	3	BJ	91780	6500	20	NW	MP	1	4	0
9	3	BJ	91780	6500	20	N	MP	1	5	0
9	3	BJ	91780	6500	20	W	MP	1	6	0
9	3	BJ	91780	6500	20	NW	SP	1	7	0
9	3	BJ	91780	6500	30	N	MP	1	8	0
9	3	BJ	91780	6500	20	N	SB	1	9	0
9	3	BJ	91780	6500	10	NW	SB	1	10	0
9	3	BJ	91780	6500	10	E	SB	2	1	0
9	3	BJ	91780	6500	20	E	SP	2	2	0
9	3	BJ	91780	6500	10	E	PJ	2	3	0
9	3	BJ	91780	6500	40	S	MP	2	4	0
9	3	BJ	91780	6500	10	E	SP	2	5	0
9	3	BJ	91780	6500	10	E	SP	2	6	0
9	3	BJ	91780	6500	10	NE	SP	2	7	0
9	3	BJ	91780	6500	20	NE	MP	2	8	0
9	3	BJ	91780	6500	20	E	PJ	2	9	0
9	3	BJ	91780	6500	10	N	SP	2	10	0
9	7	WJ	91780	6500	10	N	MP	1	1	0
9	7	WJ	91780	6500	0	N	MP	1	2	0
9	7	WJ	91780	6500	30	S	PJ	1	3	0
9	7	WJ	91780	6500	10	0	SP	1	4	0
9	7	WJ	91780	6500	10	N	SP	1	5	0
9	7	WJ	91780	6500	40	NE	MP	1	6	0
9	7	WJ	91780	6500	20	N	MP	1	7	0
9	7	WJ	91780	6500	30	E	MP	1	8	0
9	7	WJ	91780	6500	20	N	SB	1	9	0
9	7	WJ	91780	6500	10	0	SB	1	10	0
9	7	WJ	91780	6500	10	NW	MP	2	1	0
9	7	WJ	91780	6500	10	NW	MP	2	2	0
9	7	WJ	91780	6500	20	NW	MP	2	3	0
9	7	WJ	91780	6500	20	NE	MP	2	4	0
9	7	WJ	91780	6500	20	NE	MP	2	5	0
9	7	WJ	91780	6500	20	E	MP	2	6	0
9	7	WJ	91780	6500	10	N	MP	2	7	1
9	7	WJ	91780	6500	20	N	MB	2	8	0
9	7	WJ	91780	6500	10	W	SB	2	9	0
9	7	WJ	91780	6500	20	W	SB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
8	27	BJ	91980	7000	30	SW	MP	1	1	0
8	27	BJ	91980	7000	10	NW	MP	1	2	0
8	27	BJ	91980	7000	40	NW	MP	1	3	0
8	27	BJ	91980	6500	10	0	SB	1	4	0
8	27	BJ	91980	6500	10	0	OT	1	5	0
8	27	BJ	91980	6500	10	SE	SB	1	6	0
8	27	BJ	91980	7000	50	S	MP	1	7	0
8	27	BJ	91980	7000	10	S	SP	1	8	0
8	27	BJ	91980	7000	10	0	SP	1	9	0
8	27	BJ	91980	7000	10	E	SP	1	10	0
8	27	BJ	91980	7000	10	N	SB	2	1	0
8	27	BJ	91980	7000	10	N	SB	2	2	0
8	27	BJ	91980	7000	20	N	SB	2	3	0
8	27	BJ	91980	7000	30	E	MB	2	4	0
8	27	BJ	91980	7000	50	W	MP	2	5	0
8	27	BJ	91980	7000	30	W	MP	2	6	0
8	27	BJ	91980	6500	30	N	SB	2	7	0
8	27	BJ	91980	6500	10	0	OT	2	8	0
8	27	BJ	91980	6500	10	0	OT	2	9	0
8	27	BJ	91980	6500	10	0	OT	2	10	0
8	34	WJ	91980	7000	0	0	SB	1	1	0
8	34	WJ	91980	7000	10	N	SB	1	2	0
8	34	WJ	91980	7000	0	0	OT	1	3	0
8	34	WJ	91980	7000	10	NW	MB	1	4	0
8	34	WJ	91980	7000	10	NW	MB	1	5	0
8	34	WJ	91980	7000	20	NW	MB	1	6	0
8	34	WJ	91980	7000	40	NW	MB	1	7	0
8	34	WJ	91980	7000	20	NW	MB	1	8	0
8	34	WJ	91980	7000	40	E	SB	1	9	0
8	34	WJ	91980	7000	20	E	MP	1	10	0
8	34	WJ	91980	7000	10	N	SB	2	1	0
8	34	WJ	91980	7000	10	N	SB	2	2	0
8	34	WJ	91980	7000	10	N	SB	2	3	0
8	34	WJ	91980	7000	10	N	SB	2	4	0
8	34	WJ	91980	7000	10	N	SB	2	5	0
8	34	WJ	91980	7000	10	N	SB	2	6	0
8	34	WJ	91980	7000	10	N	SB	2	7	0
8	34	WJ	91980	7000	10	N	SB	2	8	0
8	34	WJ	91980	7000	20	W	MP	2	9	0
8	34	WJ	91980	7000	20	W	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
8	13	WJ	92080	7000	20	SE	MB	1	1	0
8	13	WJ	92080	7000	10	SE	SP	1	2	0
8	13	WJ	92080	7000	20	SE	MP	1	3	0
8	13	WJ	92080	7000	10	SE	MP	1	4	1
8	13	WJ	92080	7000	10	SE	MB	1	5	0
8	13	WJ	92080	7000	10	0	SB	1	6	0
8	13	WJ	92080	7000	10	0	SB	1	7	0
8	13	WJ	92080	7000	10	NW	SB	1	8	0
8	13	WJ	92080	7000	10	NW	SB	1	9	0
8	13	WJ	92080	7000	10	NW	SB	1	10	0
8	13	WJ	92080	7000	10	SE	MB	2	1	0
8	13	WJ	92080	7000	10	SE	MP	2	2	0
8	13	WJ	92080	7000	10	SE	MB	2	3	0
8	13	WJ	92080	7000	10	SE	MB	2	4	0
8	13	WJ	92080	7000	10	SE	MB	2	5	0
8	13	WJ	92080	7000	10	SE	MB	2	6	0
8	13	WJ	92080	7000	10	SE	SB	2	7	0
8	13	WJ	92080	7000	10	SE	SB	2	8	0
8	13	WJ	92080	7000	10	S	MB	2	9	0
8	13	WJ	92080	7000	10	0	MB	2	10	0
8	14	BJ	92080	7000	10	SE	MP	1	1	0
8	14	BJ	92080	7000	10	SE	MP	1	2	0
8	14	BJ	92080	7000	10	SE	MP	1	3	0
8	14	BJ	92080	7000	10	SE	MP	1	4	0
8	14	BJ	92080	7000	10	SE	MP	1	5	0
8	14	BJ	92080	7000	10	SE	MP	1	6	0
8	14	BJ	92080	7000	10	SE	MB	1	7	0
8	14	BJ	92080	7000	10	SE	MB	1	8	0
8	14	BJ	92080	7000	10	S	MB	1	9	0
8	14	BJ	92080	7000	20	S	MB	1	10	0
8	14	BJ	92080	7000	40	E	MB	2	1	0
8	14	BJ	92080	7000	30	E	MP	2	2	0
8	14	BJ	92080	7000	20	E	MP	2	3	0
8	14	BJ	92080	7000	50	S	MP	2	4	0
8	14	BJ	92080	7000	40	E	MP	2	5	0
8	14	BJ	92080	7000	30	E	MP	2	6	0
8	14	BJ	92080	7000	50	SE	MP	2	7	0
8	14	BJ	92080	7000	20	SE	MP	2	8	0
8	14	BJ	92080	7000	20	E	MP	2	9	0
8	14	BJ	92080	7000	0	E	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
8	5	BJ	91680	7000	10	N	MB	1	1	0
8	5	BJ	91680	7000	10	SE	SB	1	2	0
8	5	BJ	91680	7000	10	SE	MB	1	3	0
8	5	BJ	91880	7000	50	SW	MB	1	4	0
8	5	BJ	91680	7000	10	S	SP	1	5	0
8	5	BJ	91880	7000	20	SW	MB	1	6	0
8	5	BJ	91880	7000	10	E	MB	1	7	0
8	5	BJ	91880	7000	40	E	MB	1	8	0
8	5	BJ	91880	7000	20	SE	MP	1	9	0
8	5	BJ	91680	7000	10	SE	SP	1	10	0
8	5	BJ	91880	7000	10	N	SP	2	1	0
8	5	BJ	91680	7000	10	N	SP	2	2	0
8	5	BJ	91880	7000	10	N	SP	2	3	0
8	5	BJ	91880	7000	10	NW	SP	2	4	0
8	5	BJ	91880	7000	10	NE	SB	2	5	0
8	5	BJ	91880	7000	30	SW	SB	2	6	0
8	5	BJ	91880	7000	40	SE	MP	2	7	0
8	5	BJ	91880	7000	20	SE	PJ	2	8	0
8	5	BJ	91880	7000	10	E	MP	2	9	0
8	5	BJ	91680	7000	40	E	PJ	2	10	0
8	11	BJ	91680	7000	10	SE	MP	1	1	0
8	11	BJ	91680	7000	20	E	MP	1	2	0
8	11	BJ	91680	7000	20	SE	MB	1	3	0
8	11	BJ	91680	7000	30	SE	MP	1	4	0
8	11	BJ	91880	7000	30	S	MP	1	5	0
8	11	BJ	91880	7000	10	S	SP	1	6	0
8	11	BJ	91880	7000	10	N	SP	1	7	0
8	11	BJ	91880	7000	10	N	SP	1	8	0
8	11	BJ	91880	7000	10	N	SP	1	9	0
8	11	BJ	91880	7000	10	N	MP	1	10	0
8	11	BJ	91880	6500	40	NE	MB	2	1	0
8	11	BJ	91880	6500	50	S	MP	2	2	0
8	11	BJ	91880	6500	40	S	SP	2	3	0
8	11	BJ	91880	6500	40	S	PJ	2	4	0
8	11	BJ	91880	7000	10	SW	SP	2	5	0
8	11	BJ	91880	7000	10	0	SP	2	6	0
8	11	BJ	91880	7000	10	SE	SP	2	7	0
8	11	BJ	91880	7000	10	E	SP	2	8	0
8	11	BJ	91880	7000	10	SE	SP	2	9	0
8	11	BJ	91880	7000	10	SE	SP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
7	34	PU	92280	7500	50	N	MB	1	1	0
7	34	PU	92280	7500	50	N	MB	1	2	0
7	34	PU	92280	7500	50	N	MB	1	3	0
7	34	PU	92280	7500	40	SE	MB	1	4	0
7	34	PU	92280	7500	30	NE	MB	1	5	0
7	34	PU	92280	7500	30	SW	MB	1	6	0
7	34	PU	92280	7500	30	W	MB	1	7	0
7	34	PU	92280	7500	30	W	MB	1	8	0
7	34	PU	92280	7500	30	S	MB	1	9	0
7	34	PU	92280	7500	30	NW	MB	1	10	0
7	34	PU	92280	7500	50	N	MB	2	1	0
7	34	PU	92280	7500	50	N	MB	2	2	0
7	34	PU	92280	7500	50	SE	MB	2	3	0
7	34	PU	92280	7500	50	SE	MB	2	4	0
7	34	PU	92280	7500	50	SE	MB	2	5	1
7	34	PU	92280	7500	50	E	MB	2	6	0
7	34	PU	92280	7500	50	E	MB	2	7	0
7	34	PU	92280	7500	50	E	MB	2	8	0
7	34	PU	92280	7500	10	E	MB	2	9	0
7	34	PU	92280	7500	10	NE	MB	2	10	0
8	3	PU	92380	7000	10	N	MB	1	1	0
8	3	PU	92380	7000	10	N	SB	1	2	0
8	3	PU	92380	7000	10	N	SB	1	3	0
8	3	PU	92380	7000	10	S	SB	1	4	0
8	3	PU	92380	7000	10	S	SB	1	5	0
8	3	PU	92380	7000	30	NE	MP	1	6	0
8	3	PU	92380	7000	40	S	PJ	1	7	0
8	3	PU	92380	7000	40	E	PJ	1	8	0
8	3	PU	92380	7000	10	S	MP	1	9	0
8	3	PU	92380	7000	0	0	MP	1	10	0
8	3	PU	92380	7000	10	N	SB	2	1	0
8	3	PU	92380	7000	10	N	SB	2	2	1
8	3	PU	92380	7000	10	N	SB	2	3	0
8	3	PU	92380	7000	10	N	SB	2	4	0
8	3	PU	92380	7000	10	N	SB	2	5	0
8	3	PU	92380	7000	10	N	SB	2	6	0
8	3	PU	92380	7000	10	N	SB	2	7	0
8	3	PU	92380	7000	10	N	SB	2	8	0
8	3	PU	92380	7000	10	N	SB	2	9	0
8	3	PU	92380	7000	10	N	SB	2	10	1

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OPSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
7	28	PO	92280	8000	30	SE	MB	1	1	0
7	28	PO	92280	8000	20	SE	MB	1	2	1
7	28	PO	92280	7500	10	SE	MB	1	3	0
7	28	PO	92280	7500	10	N	MB	1	4	0
7	28	PO	92280	7500	20	NW	MB	1	5	0
7	28	PO	92280	7500	40	NW	MB	1	6	0
7	28	PO	92280	7500	40	NW	MB	1	7	0
7	28	PO	92280	7500	40	NW	MB	1	8	0
7	28	PO	92280	7500	40	NW	MB	1	9	0
7	28	PO	92280	7500	10	SE	SB	1	10	0
7	28	PO	92280	7500	50	N	MB	2	1	0
7	28	PO	92280	7500	50	N	MB	2	2	0
7	28	PO	92280	7500	50	N	MB	2	3	0
7	28	PO	92280	7500	50	E	MB	2	4	0
7	28	PO	92280	7500	40	N	MB	2	5	0
7	28	PO	92280	7500	40	N	MB	2	6	0
7	28	PO	92280	7500	10	SE	MB	2	7	0
7	28	PO	92280	7500	30	SE	MB	2	8	0
7	28	PO	92280	7500	30	SE	MB	2	9	0
7	28	PO	92280	7500	30	SE	MB	2	10	0
7	32	WJ	91980	8000	20	NW	MB	1	1	0
7	32	WJ	91980	8000	30	NW	MB	1	2	0
7	32	WJ	91980	8000	30	NW	OT	1	3	0
7	32	WJ	91980	8000	30	NW	OT	1	4	0
7	32	WJ	91980	8000	50	SE	MB	1	5	1
7	32	WJ	91980	8000	50	SE	MB	1	6	1
7	32	WJ	91980	8000	50	SE	MB	1	7	0
7	32	WJ	91980	8000	50	SE	MB	1	8	0
7	32	WJ	91980	8000	10	0	MB	1	9	0
7	32	WJ	91980	8000	10	NW	MB	1	10	0
7	32	WJ	91980	8000	20	NW	MB	2	1	0
7	32	WJ	91980	8000	30	NW	OT	2	2	0
7	32	WJ	91980	8000	30	NW	OT	2	3	0
7	32	WJ	91980	8000	40	S	OT	2	4	0
7	32	WJ	91980	8000	40	E	MB	2	5	0
7	32	WJ	91980	8000	40	N	OT	2	6	0
7	32	WJ	91980	8000	40	NE	OT	2	7	0
7	32	WJ	91980	8000	40	NE	OT	2	8	0
7	32	WJ	91980	8000	40	S	MB	2	9	0
7	32	WJ	91980	8000	30	S	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
7	19	PO	92380	8000	30	E	MB	1	1	1
7	19	PO	92380	8000	30	E	MB	1	2	0
7	19	PO	92380	8000	40	NE	OT	1	3	1
7	19	PO	92380	7500	40	NE	OT	1	4	0
7	19	PO	92380	7500	10	NE	OT	1	5	0
7	19	PO	92380	7500	30	SW	MB	1	6	0
7	19	PO	92380	7500	30	SW	MB	1	7	0
7	19	PO	92380	7500	20	SW	MB	1	8	0
7	19	PO	92380	7500	30	SW	MB	1	9	0
7	19	PO	92380	7500	30	SW	MB	1	10	1
7	19	PO	92380	7500	50	NW	OT	2	1	1
7	19	PO	92380	7500	50	NW	OT	2	2	0
7	19	PO	92380	7500	40	SE	OT	2	3	0
7	19	PO	92380	7500	50	N	OT	2	4	0
7	19	PO	92380	7500	50	N	OT	2	5	0
7	19	PO	92380	7500	30	S	MB	2	6	0
7	19	PO	92380	7500	30	SE	MB	2	7	1
7	19	PO	92380	7500	30	SE	MB	2	8	0
7	19	PO	92380	7500	30	SE	MP	2	9	0
7	19	PO	92380	7500	30	SE	MP	2	10	0
7	22	PO	92380	7500	10	0	MB	1	1	0
7	22	PO	92380	7500	10	W	MB	1	2	0
7	22	PO	92380	7500	10	NW	MB	1	3	0
7	22	PO	92380	7500	10	N	MB	1	4	0
7	22	PO	92380	7500	20	NW	MB	1	5	0
7	22	PO	92380	7500	30	NW	MB	1	6	0
7	22	PO	92380	7500	20	N	MB	1	7	0
7	22	PO	92380	7500	10	NW	MB	1	8	0
7	22	PO	92380	7500	20	SE	MB	1	9	0
7	22	PO	92380	7500	20	S	MB	1	10	0
7	22	PO	92380	7500	30	E	MB	2	1	0
7	22	PO	92380	7500	20	SE	MB	2	2	0
7	22	PO	92380	7500	10	SE	MB	2	3	0
7	22	PO	92380	7500	10	N	MB	2	4	0
7	22	PO	92380	7500	10	NE	MB	2	5	0
7	22	PO	92380	7500	10	NE	MB	2	6	0
7	22	PO	92380	7500	10	NE	MB	2	7	0
7	22	PO	92380	7500	10	NE	MB	2	8	0
7	22	PO	92380	7500	10	NE	MB	2	9	0
7	22	PO	92380	7500	0	0	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
7	16	PO	92280	7500	20	NW	MB	1	1	0
7	16	PO	92280	7500	10	NW	MB	1	2	0
7	16	PO	92280	7500	30	SE	MB	1	3	0
7	16	PO	92280	7500	30	SE	MB	1	4	1
7	16	PO	92280	7500	30	SE	MB	1	5	0
7	16	PO	92280	7500	10	0	MB	1	6	0
7	16	PO	92280	7500	10	NW	MB	1	7	1
7	16	PO	92280	7500	20	NW	MB	1	8	0
7	16	PO	92280	7500	20	NW	MB	1	9	0
7	16	PO	92280	7500	20	NW	MB	1	10	0
7	16	PO	92280	7500	0	0	SB	2	1	0
7	16	PO	92280	7500	10	0	MB	2	2	0
7	16	PO	92280	7500	10	NW	MB	2	3	0
7	16	PO	92280	7500	20	NW	MB	2	4	0
7	16	PO	92280	7500	20	NW	MB	2	5	0
7	16	PO	92280	7000	20	NW	MB	2	6	0
7	16	PO	92280	7000	10	NW	MB	2	7	0
7	16	PO	92280	7000	10	S	SB	2	8	0
7	16	PO	92280	7000	40	E	MB	2	9	0
7	16	PO	92280	7000	30	SE	MB	2	10	1
7	17	BJ	91980	7500	10	NW	MB	1	1	1
7	17	BJ	91980	7500	10	N	MB	1	2	0
7	17	BJ	91980	7500	20	N	MB	1	3	0
7	17	BJ	91980	7000	40	S	MP	1	4	0
7	17	BJ	91980	7000	10	W	MB	1	5	0
7	17	BJ	91980	7000	30	NW	MB	1	6	0
7	17	BJ	91980	7000	40	NW	MB	1	7	0
7	17	BJ	91980	7000	40	N	MB	1	8	1
7	17	BJ	91980	7000	50	W	MB	1	9	0
7	17	BJ	91980	7000	40	W	MB	1	10	0
7	17	BJ	91980	7500	10	0	MB	2	1	0
7	17	BJ	91980	7500	10	0	MB	2	2	0
7	17	BJ	91980	7500	10	0	MB	2	3	0
7	17	BJ	91980	7500	10	0	MB	2	4	0
7	17	BJ	91980	7500	10	0	MB	2	5	0
7	17	BJ	91980	7500	10	0	MB	2	6	0
7	17	BJ	91980	7500	10	NW	MB	2	7	0
7	17	BJ	91980	7500	10	0	MB	2	8	0
7	17	BJ	91980	7500	10	0	MB	2	9	0
7	17	BJ	91980	7500	10	NW	MB	2	10	0

PIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
6	32	WJ	91580	6500	30	SE	SP	1	1	0
6	32	WJ	91580	6500	30	N	SP	1	2	0
6	32	WJ	91580	6500	50	S	MP	1	3	0
6	32	WJ	91580	6500	10	E	PJ	1	4	0
6	32	WJ	91580	6500	10	E	SP	1	5	0
6	32	WJ	91580	6500	10	NE	SP	1	6	0
6	32	WJ	91580	6500	10	SE	PJ	1	7	0
6	32	WJ	91580	6500	20	NE	SP	1	8	0
6	32	WJ	91580	6500	20	E	PJ	1	9	0
6	32	WJ	91580	6500	10	E	MP	1	10	0
6	32	WJ	91580	6500	10	0	SB	2	1	0
6	32	WJ	91580	6500	10	SE	OT	2	2	0
6	32	WJ	91580	6500	20	SE	SP	2	3	0
6	32	WJ	91580	6500	30	N	MP	2	4	0
6	32	WJ	91580	6500	30	SW	SP	2	5	0
6	32	WJ	91580	6500	30	W	MP	2	6	0
6	32	WJ	91580	6500	30	W	MP	2	7	0
6	32	WJ	91580	6500	30	W	PJ	2	8	0
6	32	WJ	91580	6500	20	W	PJ	2	9	0
6	32	WJ	91580	6500	20	SW	PJ	2	10	0
6	35	WJ	91780	6500	10	W	SB	1	1	0
6	35	WJ	91780	6500	10	E	SP	1	2	0
6	35	WJ	91780	6500	10	E	SP	1	3	0
6	35	WJ	91780	6500	20	E	MP	1	4	1
6	35	WJ	91780	6500	20	E	MP	1	5	0
6	35	WJ	91780	6500	10	E	MP	1	6	0
6	35	WJ	91780	6500	10	0	PJ	1	7	0
6	35	WJ	91780	6500	10	NW	MP	1	8	0
6	35	WJ	91780	6500	10	NW	MP	1	9	0
6	35	WJ	91780	6500	10	0	PJ	1	10	0
6	35	WJ	91780	6500	10	0	MP	2	1	0
6	35	WJ	91780	6500	10	W	PJ	2	2	0
6	35	WJ	91780	6500	10	NW	MP	2	3	0
6	35	WJ	91780	6500	10	NW	MP	2	4	0
6	35	WJ	91780	6500	10	NW	MP	2	5	0
6	35	WJ	91780	6500	10	NW	MP	2	6	0
6	35	WJ	91780	6500	10	NW	MP	2	7	0
6	35	WJ	91780	6500	20	N	MP	2	8	0
6	35	WJ	91780	6500	20	N	SP	2	9	0
6	35	WJ	91780	6500	10	0	MP	2	10	0

PIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
6	27	BJ	91580	6500	30	S	MP	1	1	0
6	27	BJ	91580	6500	20	E	SP	1	2	0
6	27	BJ	91580	6500	30	N	SP	1	3	0
6	27	BJ	91580	6500	50	S	MP	1	4	0
6	27	BJ	91580	6500	10	E	SP	1	5	0
6	27	BJ	91580	6500	10	SE	PJ	1	6	0
6	27	BJ	91580	6500	10	E	PJ	1	7	0
6	27	BJ	91580	6500	10	E	MP	1	8	0
6	27	BJ	91580	6500	30	S	MP	1	9	0
6	27	BJ	91580	6500	10	NE	SB	1	10	0
6	27	BJ	91580	6500	20	SE	MB	2	1	0
6	27	BJ	91580	6500	10	SE	MB	2	2	0
6	27	BJ	91580	6500	10	SE	SB	2	3	0
6	27	BJ	91580	6500	50	S	OT	2	4	0
6	27	BJ	91580	6500	10	E	SP	2	5	0
6	27	BJ	91580	6500	20	N	SP	2	6	0
6	27	BJ	91580	6500	10	SE	SB	2	7	0
6	27	BJ	91580	6500	30	SW	MP	2	8	0
6	27	BJ	91580	6500	10	E	SP	2	9	0
6	27	BJ	91580	6500	10	N	SP	2	10	0
6	30	WJ	91780	6500	10	0	MP	1	1	0
6	30	WJ	91780	6500	10	SW	MP	1	2	0
6	30	WJ	91780	6500	10	S	MP	1	3	0
6	30	WJ	91780	6500	10	N	MP	1	4	0
6	30	WJ	91780	6500	10	N	MP	1	5	0
6	30	WJ	91780	6500	10	N	PJ	1	6	0
6	30	WJ	91780	6500	10	N	SP	1	7	0
6	30	WJ	91780	6500	20	NE	SB	1	8	0
6	30	WJ	91780	6500	10	0	SP	1	9	0
6	30	WJ	91780	6500	10	0	SP	1	10	0
6	30	WJ	91780	6500	10	E	PJ	2	1	0
6	30	WJ	91780	6500	10	E	PJ	2	2	0
6	30	WJ	91780	6500	10	E	PJ	2	3	0
6	30	WJ	91780	6500	10	E	MP	2	4	0
6	30	WJ	91780	6500	10	E	MP	2	5	0
6	30	WJ	91780	6500	10	E	MP	2	6	0
6	30	WJ	91780	6500	10	SE	MP	2	7	0
6	30	WJ	91780	6500	10	0	PJ	2	8	0
6	30	WJ	91780	6500	10	0	MP	2	9	0
6	30	WJ	91780	6500	10	N	PJ	2	10	0

PIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
6	11	BJ	91580	6500	20	N	MP	1	1	0
6	11	BJ	91580	6500	10	0	MP	1	2	0
6	11	BJ	91580	6500	20	SE	PJ	1	3	0
6	11	BJ	91580	6500	20	S	MP	1	4	0
6	11	BJ	91580	6500	20	SW	MP	1	5	1
6	11	BJ	91580	6500	10	0	PJ	1	6	0
6	11	BJ	91580	6500	10	0	SP	1	7	0
6	11	BJ	91580	6500	10	0	SP	1	8	0
6	11	BJ	91580	6500	10	0	MP	1	9	0
6	11	BJ	91580	6500	20	N	MP	1	10	0
6	11	BJ	91580	6500	10	SE	SP	2	1	0
6	11	BJ	91580	6500	10	0	SP	2	2	0
6	11	BJ	91580	6500	20	N	SP	2	3	0
6	11	BJ	91580	6500	10	SE	MP	2	4	0
6	11	BJ	91580	6500	10	N	PJ	2	5	0
6	11	BJ	91580	6500	20	E	MP	2	6	1
6	11	BJ	91580	6500	10	SW	PJ	2	7	0
6	11	BJ	91580	6500	10	0	SP	2	8	0
6	11	BJ	91580	6500	10	SE	PJ	2	9	0
6	11	BJ	91580	6500	10	0	SP	2	10	0
6	14	WJ	91580	6500	10	E	MP	1	1	0
6	14	WJ	91580	6500	10	SE	PJ	1	2	0
6	14	WJ	91580	6500	10	0	PJ	1	3	0
6	14	WJ	91580	6500	10	0	SP	1	4	0
6	14	WJ	91580	6500	10	NW	MP	1	5	0
6	14	WJ	91580	6500	20	NW	MP	1	6	0
6	14	WJ	91580	6500	10	NW	MP	1	7	0
6	14	WJ	91580	6500	30	SE	MP	1	8	0
6	14	WJ	91580	6500	20	SE	MP	1	9	0
6	14	WJ	91580	6500	10	NW	MP	1	10	0
6	14	WJ	91580	6500	10	N	SP	2	1	0
6	14	WJ	91580	6500	10	N	SP	2	2	0
6	14	WJ	91580	6500	10	N	SP	2	3	0
6	14	WJ	91580	6500	10	N	SP	2	4	0
6	14	WJ	91580	6500	30	SE	SP	2	5	0
6	14	WJ	91580	6500	0	0	SP	2	6	0
6	14	WJ	91580	6500	10	N	MP	2	7	0
6	14	WJ	91580	6500	10	N	MP	2	8	0
6	14	WJ	91580	6500	20	N	MP	2	9	0
6	14	WJ	91580	6500	10	N	MP	2	10	0

PIC BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
5	36	DA	91880	6500	0	0	SP	1	1	0
5	36	DA	91880	6500	10	NE	MP	1	2	0
5	36	DA	91880	6500	20	S	SP	1	3	0
5	36	DA	91880	6500	10	SE	SP	1	4	0
5	36	DA	91880	6500	10	SE	MP	1	5	0
5	36	DA	91880	6500	10	E	SP	1	6	0
5	36	DA	91880	7000	30	N	MP	1	7	0
5	36	DA	91880	7000	30	S	MP	1	8	0
5	36	DA	91880	7000	30	S	MP	1	9	0
5	36	DA	91880	7000	10	S	MP	1	10	0
5	36	DA	91880	6500	10	S	MP	2	1	0
5	36	DA	91880	6500	10	S	SP	2	2	0
5	36	DA	91880	6500	10	NE	SP	2	3	0
5	36	DA	91880	6500	10	E	SP	2	4	0
5	36	DA	91880	6500	10	E	PJ	2	5	0
5	36	DA	91880	6500	10	E	SP	2	6	0
5	36	DA	91880	6500	10	SE	SP	2	7	0
5	36	DA	91880	6500	0	0	MP	2	8	1
5	36	DA	91880	6500	10	SE	SP	2	9	0
5	36	DA	91880	7000	10	SE	SP	2	10	0
6	8	WJ	91580	6500	10	NW	MP	1	1	0
6	8	WJ	91580	6500	10	W	SP	1	2	0
6	8	WJ	91580	6500	30	SE	MP	1	3	0
6	8	WJ	91580	6500	10	NW	MP	1	4	0
6	8	WJ	91580	6500	10	NW	MP	1	5	0
6	8	WJ	91580	6500	10	NW	MP	1	6	0
6	8	WJ	91580	6500	10	NW	PJ	1	7	0
6	8	WJ	91580	6500	20	N	MP	1	8	0
6	8	WJ	91580	6500	10	0	SB	1	9	0
6	8	WJ	91580	6500	10	0	SB	1	10	0
6	8	WJ	91580	6500	30	E	MP	2	1	0
6	8	WJ	91580	6500	30	E	MP	2	2	0
6	8	WJ	91580	6500	30	E	MP	2	3	0
6	8	WJ	91580	6500	30	E	MP	2	4	0
6	8	WJ	91580	6500	30	E	SP	2	5	0
6	8	WJ	91580	6500	10	N	MP	2	6	0
6	8	WJ	91580	6500	10	0	SB	2	7	0
6	8	WJ	91580	6500	10	0	SB	2	8	0
6	8	WJ	91580	6500	10	0	SP	2	9	0
6	8	WJ	91580	6500	10	0	SB	2	10	0

PIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
5	28	DA	91880	7000	0	0	SB	1	1	0
5	28	DA	91880	7000	10	S	SB	1	2	0
5	28	DA	91880	7000	30	E	MP	1	3	0
5	28	DA	91880	7000	30	S	PJ	1	4	0
5	28	DA	91880	7000	10	N	MP	1	5	0
5	28	DA	91880	7000	20	E	SP	1	6	0
5	28	DA	91880	7000	20	S	PJ	1	7	0
5	28	DA	91880	7000	10	S	SP	1	8	1
5	28	DA	91880	7000	10	S	SP	1	9	1
5	28	DA	91880	7000	0	0	PJ	1	10	0
5	28	DA	91880	7000	10	N	SB	2	1	0
5	28	DA	91880	6500	10	N	SB	2	2	0
5	28	DA	91880	6500	0	0	SB	2	3	0
5	28	DA	91880	6500	20	NE	MB	2	4	0
5	28	DA	91880	6500	20	SW	PJ	2	5	0
5	28	DA	91880	6500	10	N	SP	2	6	0
5	28	DA	91880	6500	10	N	SP	2	7	0
5	28	DA	91880	6500	10	N	MB	2	8	0
5	28	DA	91880	6500	0	0	MB	2	9	0
5	28	DA	91880	6500	0	N	SB	2	10	0
5	29	PO	91880	7000	10	W	SP	1	1	0
5	29	PO	91880	7000	20	NW	OT	1	2	0
5	29	PO	91880	7000	10	N	SB	1	3	0
5	29	PO	91880	7000	10	0	SB	1	4	0
5	29	PO	91880	7000	10	0	SP	1	5	0
5	29	PO	91880	7000	10	N	SB	1	6	0
5	29	PO	91880	7000	20	N	MB	1	7	0
5	29	PO	91880	7000	30	SW	PJ	1	8	0
5	29	PO	91880	7000	20	W	SP	1	9	0
5	29	PO	91880	7000	20	W	SB	1	10	0
5	29	PO	91880	7000	10	0	SB	2	1	0
5	29	PO	91880	7000	10	N	SP	2	2	0
5	29	PO	91880	7000	10	W	SP	2	3	0
5	29	PO	91880	7000	10	N	SB	2	4	0
5	29	PO	91880	7000	10	N	SB	2	5	1
5	29	PO	91880	7000	10	NE	SB	2	6	0
5	29	PO	91880	7000	20	E	SB	2	7	0
5	29	PO	91880	7000	10	NE	SP	2	8	1
5	29	PO	91880	7000	10	NE	SB	2	9	1
5	29	PO	91880	7000	10	NE	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
5	15	DA	91780	7000	10	N	MP	1	1	0
5	15	DA	91780	7000	10	NW	MB	1	2	0
5	15	DA	91780	7000	10	NW	MP	1	3	0
5	15	DA	91780	7000	10	N	MP	1	4	0
5	15	DA	91780	6500	0	N	MP	1	5	0
5	15	DA	91780	6500	10	N	MP	1	6	0
5	15	DA	91780	6500	30	NW	MP	1	7	0
5	15	DA	91780	6500	0	0	SB	1	8	0
5	15	DA	91780	6500	10	0	SB	1	9	0
5	15	DA	91780	7000	40	S	SP	1	10	0
5	15	DA	91780	7000	10	E	PJ	2	1	0
5	15	DA	91780	7000	10	0	PJ	2	2	0
5	15	DA	91780	7000	10	N	SP	2	3	0
5	15	DA	91780	7000	10	W	PJ	2	4	0
5	15	DA	91780	7000	30	N	SP	2	5	0
5	15	DA	91780	7000	10	N	SB	2	6	0
5	15	DA	91780	6500	10	N	SB	2	7	1
5	15	DA	91780	6500	10	N	SP	2	8	0
5	15	DA	91780	6500	10	N	MP	2	9	0
5	15	DA	91780	6500	20	N	MP	2	10	0
5	27	PO	91880	7000	10	0	SP	1	1	0
5	27	PO	91880	7000	20	W	SB	1	2	0
5	27	PO	91880	7000	20	W	SP	1	3	0
5	27	PO	91880	7000	10	N	SP	1	4	0
5	27	PO	91880	7000	20	N	MB	1	5	0
5	27	PO	91880	7000	20	N	MB	1	6	0
5	27	PO	91880	7000	10	N	MB	1	7	0
5	27	PO	91880	7000	20	N	MB	1	8	0
5	27	PO	91880	6500	40	N	MB	1	9	0
5	27	PO	91880	6500	30	N	MB	1	10	0
5	27	PO	91880	7000	0	0	SP	2	1	0
5	27	PO	91880	7000	0	0	SP	2	2	0
5	27	PO	91880	7000	0	0	SP	2	3	0
5	27	PO	91880	7000	0	0	SP	2	4	0
5	27	PO	91880	7000	0	0	SP	2	5	0
5	27	PO	91880	7000	10	N	SP	2	6	0
5	27	PO	91880	7000	10	N	SP	2	7	0
5	27	PO	91880	7000	10	N	SP	2	8	0
5	27	PO	91880	7000	20	N	SB	2	9	0
5	27	PO	91880	6500	30	N	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
5	8	PO	91780	7000	10	SE	MP	1	1	0
5	8	PO	91780	7000	0	N	MB	1	2	0
5	8	PO	91780	7000	10	N	SB	1	3	0
5	8	PO	91780	7000	10	N	MB	1	4	0
5	8	PO	91780	7000	5	N	MB	1	5	0
5	8	PO	91780	7000	5	N	MB	1	6	0
5	8	PO	91780	7000	10	N	MB	1	7	0
5	8	PO	91780	7000	20	N	MB	1	8	0
5	8	PO	91780	7000	20	S	MB	1	9	0
5	8	PO	91780	7000	10	S	MB	1	10	0
5	8	PO	91780	7000	10	E	MP	2	1	0
5	8	PO	91780	7000	0	E	SB	2	2	0
5	8	PO	91780	7000	10	NE	MB	2	3	0
5	8	PO	91780	7000	10	E	MB	2	4	0
5	8	PO	91780	7000	5	S	MB	2	5	1
5	8	PO	91780	7000	5	S	MB	2	6	0
5	8	PO	91780	7000	0	0	MB	2	7	0
5	8	PO	91780	7000	10	N	SB	2	8	1
5	8	PO	91780	7000	10	N	MB	2	9	1
5	8	PO	91780	7000	10	N	SB	2	10	0
5	13	DA	91780	7000	50	S	SP	1	1	0
5	13	DA	91780	7000	10	S	SP	1	2	0
5	13	DA	91780	7000	40	S	SP	1	3	0
5	13	DA	91780	7000	40	S	OT	1	4	0
5	13	DA	91780	7000	20	S	SP	1	5	1
5	13	DA	91780	7000	40	S	SB	1	6	0
5	13	DA	91780	7000	0	0	MP	1	7	0
5	13	DA	91780	7000	10	N	MP	1	8	0
5	13	DA	91780	7000	20	W	MP	1	9	1
5	13	DA	91780	7000	20	W	MP	1	10	0
5	13	DA	91780	6500	10	N	MB	2	1	0
5	13	DA	91780	6500	0	0	SB	2	2	0
5	13	DA	91780	7000	40	S	SB	2	3	0
5	13	DA	91780	7000	20	S	MP	2	4	0
5	13	DA	91780	7000	10	SE	MP	2	5	0
5	13	DA	91780	7000	20	E	SB	2	6	0
5	13	DA	91780	7000	30	E	SB	2	7	0
5	13	DA	91780	7000	10	SE	MP	2	8	0
5	13	DA	91780	7000	10	SE	MP	2	9	0
5	13	DA	91780	7000	0	0	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
4	23	BJ	92480	7000	30	S	MB	1	1	0
4	23	BJ	92480	7000	10	O	OT	1	2	0
4	23	BJ	92480	7000	30	E	MB	1	3	1
4	23	BJ	92480	7000	30	E	MB	1	4	0
4	23	BJ	92480	7000	40	E	MB	1	5	0
4	23	BJ	92480	7500	30	E	MB	1	6	1
4	23	BJ	92480	7500	20	SE	MP	1	7	0
4	23	BJ	92480	7500	10	S	MP	1	8	0
4	23	BJ	92480	7500	10	O	MB	1	9	1
4	23	BJ	92480	7500	10	E	MB	1	10	0
4	23	BJ	92480	7000	40	S	MP	2	1	0
4	23	BJ	92480	7000	30	S	SP	2	2	0
4	23	BJ	92480	7000	30	S	SP	2	3	0
4	23	BJ	92480	7500	30	E	MP	2	4	0
4	23	BJ	92480	7500	10	S	MP	2	5	0
4	23	BJ	92480	7500	10	SE	MP	2	6	0
4	23	BJ	92480	7500	10	NW	MP	2	7	0
4	23	BJ	92480	7500	20	NW	MB	2	8	0
4	23	BJ	92480	7000	30	NW	MB	2	9	0
4	23	BJ	92480	7000	20	E	MB	2	10	0
4	25	PO	92480	8000	30	S	SB	1	1	0
4	25	PO	92480	8000	10	SW	OT	1	2	0
4	25	PO	92480	8000	10	S	MB	1	3	0
4	25	PO	92480	8000	10	W	OT	1	4	0
4	25	PO	92480	8000	10	W	OT	1	5	1
4	25	PO	92480	8000	10	S	MB	1	6	0
4	25	PO	92480	8000	10	S	MB	1	7	0
4	25	PO	92480	8000	10	N	MB	1	8	0
4	25	PO	92480	8000	40	N	MB	1	9	0
4	25	PO	92480	7500	40	N	MB	1	10	0
4	25	PO	92480	7500	20	SW	MB	2	1	0
4	25	PO	92480	7500	20	W	MB	2	2	0
4	25	PO	92480	7500	20	S	MB	2	3	0
4	25	PO	92480	7500	20	S	OT	2	4	0
4	25	PO	92480	8000	20	S	MB	2	5	0
4	25	PO	92480	8000	10	SW	OT	2	6	0
4	25	PO	92480	8000	10	W	OT	2	7	0
4	25	PO	92480	7500	10	N	MB	2	8	0
4	25	PO	92480	7500	10	N	MB	2	9	0
4	25	PO	92480	7500	20	N	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
4	14	PO	92480	7500	30	E	MB	1	1	0
4	14	PO	92480	7500	30	E	MB	1	2	1
4	14	PO	92480	7500	30	E	MB	1	3	0
4	14	PO	92480	7500	30	E	MB	1	4	0
4	14	PO	92480	7500	20	SE	MB	1	5	0
4	14	PO	92480	7500	30	E	MB	1	6	1
4	14	PO	92480	7500	10	E	MB	1	7	0
4	14	PO	92480	7500	20	S	MB	1	8	0
4	14	PO	92480	7500	10	S	MB	1	9	0
4	14	PO	92480	7500	10	0	MB	1	10	0
4	14	PO	92480	7500	50	SW	MB	2	1	0
4	14	PO	92480	7500	30	SW	MB	2	2	0
4	14	PO	92480	7500	20	SW	MB	2	3	0
4	14	PO	92480	7500	20	W	MB	2	4	0
4	14	PO	92480	7500	20	SE	MB	2	5	0
4	14	PO	92480	7500	20	SE	MB	2	6	1
4	14	PO	92480	7500	20	SE	MB	2	7	0
4	14	PO	92480	7500	10	N	MB	2	8	0
4	14	PO	92480	7500	10	SW	MB	2	9	1
4	14	PO	92480	7500	10	SW	MB	2	10	0
4	18	PO	91780	7000	20	N	MB	1	1	0
4	18	PO	91780	7000	20	N	MB	1	2	0
4	18	PO	91780	7000	20	N	MB	1	3	0
4	18	PO	91780	7000	20	S	SB	1	4	0
4	18	PO	91780	7000	40	S	PJ	1	5	0
4	18	PO	91780	7000	10	S	MP	1	6	0
4	18	PO	91780	7000	10	S	PJ	1	7	0
4	18	PO	91780	7000	10	S	PJ	1	8	2
4	18	PO	91780	7500	10	S	PJ	1	9	1
4	18	PO	91780	7500	30	S	PJ	1	10	0
4	18	PO	91780	7500	40	N	MB	2	1	0
4	18	PO	91780	7500	20	S	SB	2	2	0
4	18	PO	91780	7500	10	S	SB	2	3	0
4	18	PO	91780	7500	20	S	SB	2	4	0
4	18	PO	91780	7500	20	S	SB	2	5	0
4	18	PO	91780	7500	40	E	SB	2	6	0
4	18	PO	91780	7500	40	E	SB	2	7	0
4	18	PO	91780	7500	40	E	SP	2	8	0
4	18	PO	91780	7500	30	E	SP	2	9	0
4	18	PO	91780	7500	0	E	SP	2	10	1

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
4	8	BJ	92480	7500	20	N	MB	1	1	0
4	8	BJ	92480	7500	30	N	MB	1	2	0
4	8	BJ	92480	7500	10	SE	MB	1	3	0
4	8	BJ	92480	7500	30	SE	MB	1	4	0
4	8	BJ	92480	7500	20	S	MB	1	5	0
4	8	BJ	92480	7500	10	SE	MB	1	6	0
4	8	BJ	92480	7500	10	SE	MB	1	7	0
4	8	BJ	92480	7500	10	SE	MB	1	8	0
4	8	BJ	92480	8000	20	S	MB	1	9	0
4	8	BJ	92480	8000	10	0	MB	1	10	0
4	8	BJ	92480	7500	10	N	MB	2	1	1
4	8	BJ	92480	7500	20	N	MB	2	2	0
4	8	BJ	92480	7500	20	N	MB	2	3	0
4	8	BJ	92480	7500	10	S	MB	2	4	0
4	8	BJ	92480	7500	30	S	MB	2	5	0
4	8	BJ	92480	7500	20	SE	MB	2	6	0
4	8	BJ	92480	7500	30	E	MB	2	7	0
4	8	BJ	92480	7500	20	E	MB	2	8	0
4	8	BJ	92480	7500	20	SE	MB	2	9	0
4	8	BJ	92480	7500	30	E	MB	2	10	0
4	13	WJ	92380	7500	10	0	MB	1	1	0
4	13	WJ	92380	7500	10	SW	OT	1	2	0
4	13	WJ	92380	7500	10	SW	OT	1	3	0
4	13	WJ	92380	8000	10	S	MB	1	4	0
4	13	WJ	92380	8000	20	S	MB	1	5	1
4	13	WJ	92380	8000	10	0	MB	1	6	0
4	13	WJ	92380	8000	10	W	MB	1	7	0
4	13	WJ	92380	8000	10	W	MB	1	8	0
4	13	WJ	92380	8000	10	S	MB	1	9	0
4	13	WJ	92380	8000	10	N	MB	1	10	0
4	13	WJ	92380	7500	10	SE	MB	2	1	0
4	13	WJ	92380	7500	10	SW	MB	2	2	0
4	13	WJ	92380	7500	20	SW	MB	2	3	0
4	13	WJ	92380	7500	20	SW	OT	2	4	0
4	13	WJ	92380	7500	10	SW	OT	2	5	0
4	13	WJ	92380	7500	20	SW	OT	2	6	0
4	13	WJ	92380	7500	10	SW	OT	2	7	0
4	13	WJ	92380	7500	10	0	OT	2	8	0
4	13	WJ	92380	7500	10	N	OT	2	9	0
4	13	WJ	92380	7500	10	N	OT	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
3	34	BJ	91780	6000	0	0	SB	1	1	0
3	34	BJ	91780	6000	10	0	SB	1	2	0
3	34	BJ	91780	6000	10	0	MB	1	3	0
3	34	BJ	91780	6000	50	S	MP	1	4	0
3	34	BJ	91780	6500	40	SE	MP	1	5	0
3	34	BJ	91780	6500	20	SE	SB	1	6	0
3	34	BJ	91780	6500	50	SW	MP	1	7	0
3	34	BJ	91780	6500	10	S	PJ	1	8	0
3	34	BJ	91780	6500	10	0	PJ	1	9	0
3	34	BJ	91780	6500	10	NE	SP	1	10	0
3	34	BJ	91780	6500	20	NW	MP	2	1	0
3	34	BJ	91780	6500	40	NW	MP	2	2	1
3	34	BJ	91780	6500	10	NW	SB	2	3	0
3	34	BJ	91780	6000	10	0	SB	2	4	0
3	34	BJ	91780	6000	10	0	SB	2	5	0
3	34	BJ	91780	6000	0	0	SB	2	6	0
3	34	BJ	91780	6000	50	E	MP	2	7	0
3	34	BJ	91780	6500	50	E	MP	2	8	0
3	34	BJ	91780	6500	40	E	SP	2	9	0
3	34	BJ	91780	6500	10	0	SP	2	10	0
4	1	BJ	92280	7500	50	S	MB	1	1	0
4	1	BJ	92280	7500	50	N	OT	1	2	0
4	1	BJ	92280	7500	10	E	SB	1	3	0
4	1	BJ	92280	7500	50	S	MB	1	4	0
4	1	BJ	92280	7500	30	SE	MB	1	5	0
4	1	BJ	92280	7500	40	SE	MB	1	6	0
4	1	BJ	92280	7500	40	SE	MB	1	7	0
4	1	BJ	92280	7500	30	SE	MB	1	8	0
4	1	BJ	92280	7500	30	SE	MB	1	9	0
4	1	BJ	92280	8000	30	SE	MB	1	10	0
4	1	BJ	92280	7500	50	N	MB	2	1	0
4	1	BJ	92280	7500	50	N	MB	2	2	0
4	1	BJ	92280	7500	40	N	MB	2	3	0
4	1	BJ	92280	7500	10	E	MB	2	4	0
4	1	BJ	92280	7500	50	S	MP	2	5	0
4	1	BJ	92280	7500	50	SE	MP	2	6	0
4	1	BJ	92280	7500	30	SE	MB	2	7	0
4	1	BJ	92280	7500	40	E	MB	2	8	0
4	1	BJ	92280	7500	40	E	MB	2	9	0
4	1	BJ	92280	7500	10	SE	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
3	18	BJ	91680	6500	10	SW	SB	1	1	0
3	18	BJ	91680	6500	10	W	SB	1	2	0
3	18	BJ	91680	6500	10	W	SB	1	3	0
3	18	BJ	91680	6500	10	SW	SB	1	4	0
3	18	BJ	91680	6500	10	0	SB	1	5	0
3	18	BJ	91680	6500	10	N	SB	1	6	0
3	18	BJ	91680	6500	10	N	SB	1	7	0
3	18	BJ	91680	6500	10	NW	SB	1	8	0
3	18	BJ	91680	6500	20	W	SB	1	9	0
3	18	BJ	91680	6500	10	SW	SB	1	10	0
3	18	BJ	91680	6500	10	0	SB	2	1	0
3	18	BJ	91680	6500	10	0	SB	2	2	0
3	18	BJ	91680	6500	10	0	SB	2	3	1
3	18	BJ	91680	6500	10	0	SB	2	4	0
3	18	BJ	91680	6500	10	0	SB	2	5	0
3	18	BJ	91680	6500	10	NW	SB	2	6	0
3	18	BJ	91680	6500	10	NW	SB	2	7	0
3	18	BJ	91680	6500	10	SW	SB	2	8	0
3	18	BJ	91680	6500	10	SW	SB	2	9	0
3	18	BJ	91680	6500	10	SW	SB	2	10	0
3	19	WJ	91780	6500	10	N	SP	1	1	0
3	19	WJ	91780	6500	10	0	SP	1	2	0
3	19	WJ	91780	6500	10	NW	SB	1	3	0
3	19	WJ	91780	6500	10	NW	SB	1	4	0
3	19	WJ	91780	6500	10	N	SB	1	5	0
3	19	WJ	91780	6500	10	N	SB	1	6	0
3	19	WJ	91780	6500	10	0	SB	1	7	0
3	19	WJ	91780	6500	10	0	SB	1	8	0
3	19	WJ	91780	6500	10	SE	PJ	1	9	0
3	19	WJ	91780	6500	20	SW	PJ	1	10	0
3	19	WJ	91780	6500	10	0	SP	2	1	0
3	19	WJ	91780	6500	10	0	SP	2	2	0
3	19	WJ	91780	6500	10	N	SP	2	3	0
3	19	WJ	91780	6500	10	N	SP	2	4	0
3	19	WJ	91780	6500	10	N	SB	2	5	0
3	19	WJ	91780	6500	10	SE	SP	2	6	0
3	19	WJ	91780	6500	10	E	PJ	2	7	0
3	19	WJ	91780	6500	10	SE	PJ	2	8	0
3	19	WJ	91780	6500	10	NE	PJ	2	9	0
3	19	WJ	91780	6500	10	N	SP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
3	14	BJ	91780	6500	0	0	SB	1	1	0
3	14	BJ	91780	6500	0	0	SB	1	2	0
3	14	BJ	91780	6500	0	0	SB	1	3	0
3	14	BJ	91780	6500	10	SE	SP	1	4	0
3	14	BJ	91780	6500	10	SE	PJ	1	5	0
3	14	BJ	91780	6500	10	SE	PJ	1	6	0
3	14	BJ	91780	6500	10	SE	PJ	1	7	0
3	14	BJ	91780	6500	10	NE	SP	1	8	0
3	14	BJ	91780	6500	10	N	SP	1	9	0
3	14	BJ	91780	6500	0	0	SB	1	10	0
3	14	BJ	91780	6500	10	N	SP	2	1	0
3	14	BJ	91780	6500	10	N	SB	2	2	0
3	14	BJ	91780	6500	10	0	SB	2	3	0
3	14	BJ	91780	6500	10	0	SB	2	4	0
3	14	BJ	91780	6500	10	0	SB	2	5	0
3	14	BJ	91780	6500	10	0	SB	2	6	0
3	14	BJ	91780	6500	10	W	SB	2	7	0
3	14	BJ	91780	6500	10	S	SP	2	8	0
3	14	BJ	91780	6500	10	0	SP	2	9	0
3	14	BJ	91780	6500	10	0	SB	2	10	0
3	17	BJ	91680	6500	10	0	SB	1	1	0
3	17	BJ	91680	6500	10	0	SB	1	2	0
3	17	BJ	91680	6500	10	0	SB	1	3	0
3	17	BJ	91680	6500	10	0	SB	1	4	0
3	17	BJ	91680	6500	10	0	SB	1	5	0
3	17	BJ	91680	6500	10	0	SB	1	6	0
3	17	BJ	91680	6500	10	0	SB	1	7	0
3	17	BJ	91680	6500	10	N	SB	1	8	0
3	17	BJ	91680	6500	10	S	SP	1	9	0
3	17	BJ	91680	6500	20	S	MP	1	10	1
3	17	BJ	91680	6500	10	W	SB	2	1	1
3	17	BJ	91680	6500	10	NW	SB	2	2	1
3	17	BJ	91680	6500	10	NW	SB	2	3	1
3	17	BJ	91680	6500	10	N	SB	2	4	1
3	17	BJ	91680	6500	10	NW	SB	2	5	1
3	17	BJ	91680	6500	10	NW	SB	2	6	1
3	17	BJ	91680	6500	10	NW	SB	2	7	1
3	17	BJ	91680	6500	10	N	SB	2	8	1
3	17	BJ	91680	6500	10	SE	SB	2	9	1
3	17	BJ	91680	6500	10	S	SB	2	10	1

PIC BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
3	1	BJ	91780	6500	30	SE	SP	1	1	0
3	1	BJ	91780	6500	10	0	SP	1	2	0
3	1	BJ	91780	6500	10	0	SP	1	3	0
3	1	BJ	91780	6500	10	0	SP	1	4	0
3	1	BJ	91780	6500	10	N	SP	1	5	0
3	1	BJ	91780	6500	10	0	SP	1	6	0
3	1	BJ	91780	6500	10	0	SP	1	7	0
3	1	BJ	91780	6500	10	0	SP	1	8	0
3	1	BJ	91780	6500	10	0	SB	1	9	0
3	1	BJ	91780	6500	10	NW	SP	1	10	0
3	1	BJ	91780	6500	10	0	SP	2	1	0
3	1	BJ	91780	6500	10	0	SB	2	2	0
3	1	BJ	91780	6500	10	N	SP	2	3	0
3	1	BJ	91780	6500	10	0	SP	2	4	0
3	1	BJ	91780	6500	10	0	SB	2	5	0
3	1	BJ	91780	6500	10	S	SB	2	6	0
3	1	BJ	91780	6500	10	0	SB	2	7	1
3	1	BJ	91780	6500	10	N	SB	2	8	0
3	1	BJ	91780	6500	10	0	SB	2	9	0
3	1	BJ	91780	6500	10	0	SB	2	10	0
3	11	BJ	91680	6500	20	S	SP	1	1	0
3	11	BJ	91680	6500	10	S	SP	1	2	0
3	11	BJ	91680	6500	10	0	SB	1	3	0
3	11	BJ	91680	6500	10	0	SB	1	4	0
3	11	BJ	91680	6500	10	0	SB	1	5	0
3	11	BJ	91680	6500	10	0	SB	1	6	0
3	11	BJ	91680	6500	10	0	SB	1	7	0
3	11	BJ	91680	6500	10	0	SB	1	8	0
3	11	BJ	91680	6500	10	0	SB	1	9	0
3	11	BJ	91680	6500	10	0	SB	1	10	0
3	11	BJ	91680	6500	10	S	SP	2	1	0
3	11	BJ	91680	6500	10	0	MP	2	2	1
3	11	BJ	91680	6500	10	N	SP	2	3	0
3	11	BJ	91680	6500	10	N	SP	2	4	0
3	11	BJ	91680	6500	10	0	SB	2	5	0
3	11	BJ	91680	6500	10	N	SB	2	6	0
3	11	BJ	91680	6500	10	S	SB	2	7	0
3	11	BJ	91680	6500	10	N	SB	2	8	0
3	11	BJ	91680	6500	10	SE	SB	2	9	0
3	11	BJ	91680	6500	10	S	SB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEV4	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
2	28	PO	91880	7000	10	N	SP	1	1	0
2	28	PO	91880	7000	10	N	SB	1	2	1
2	28	PO	91880	7000	10	N	SB	1	3	0
2	28	PO	91880	7000	10	N	SB	1	4	0
2	28	PO	91880	7000	10	N	SB	1	5	1
2	28	PO	91880	7000	10	N	SB	1	6	0
2	28	PO	91880	7000	10	NE	SB	1	7	1
2	28	PO	91880	7000	10	N	SB	1	8	0
2	28	PO	91880	7000	10	N	SB	1	9	0
2	28	PO	91880	7000	10	N	SB	1	10	0
2	28	PO	91880	7000	10	E	PJ	2	1	0
2	28	PO	91880	7000	10	E	PJ	2	2	0
2	28	PO	91880	7000	10	N	SP	2	3	0
2	28	PO	91880	7000	10	N	SP	2	4	1
2	28	PO	91880	7000	10	N	SP	2	5	1
2	28	PO	91880	7000	10	N	SP	2	6	0
2	28	PO	91880	7000	10	N	SB	2	7	0
2	28	PO	91880	7000	10	N	SB	2	8	0
2	28	PO	91880	7000	10	N	SB	2	9	0
2	28	PO	91880	7000	10	N	SB	2	10	0
2	34	PO	91880	7000	10	NE	PJ	1	1	0
2	34	PO	91880	7000	10	N	PJ	1	2	0
2	34	PO	91880	7000	10	E	SP	1	3	0
2	34	PO	91880	7000	10	E	SP	1	4	0
2	34	PO	91880	7000	10	E	SP	1	5	0
2	34	PO	91880	7000	10	E	MP	1	6	1
2	34	PO	91880	7000	10	E	MP	1	7	0
2	34	PO	91880	7000	10	E	PJ	1	8	0
2	34	PO	91880	7000	10	N	SP	1	9	0
2	34	PO	91880	7000	10	N	SP	1	10	1
2	34	PO	91880	7000	10	0	SP	2	1	0
2	34	PO	91880	7000	10	N	SP	2	2	1
2	34	PO	91880	7000	10	N	SP	2	3	0
2	34	PO	91880	7000	10	N	SP	2	4	1
2	34	PO	91880	7000	10	N	SP	2	5	0
2	34	PO	91880	7000	10	E	SB	2	6	0
2	34	PO	91880	7000	10	S	SB	2	7	1
2	34	PO	91880	7000	10	SE	PJ	2	8	0
2	34	PO	91880	7000	10	SE	PJ	2	9	1
2	34	PO	91880	7000	10	SE	PJ	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
2	17	DA	91880	6500	0	S	PJ	1	1	0
2	17	DA	91880	6500	0	NE	PJ	1	2	1
2	17	DA	91880	6500	0	NE	PJ	1	3	0
2	17	DA	91880	6500	10	SE	PJ	1	4	1
2	17	DA	91880	6500	10	SE	PJ	1	5	0
2	17	DA	91880	6500	10	SE	PJ	1	6	0
2	17	DA	91880	6500	0	0	SP	1	7	0
2	17	DA	91880	6500	5	N	SP	1	8	0
2	17	DA	91880	6500	5	N	SP	1	9	0
2	17	DA	91880	6500	5	N	SP	1	10	0
2	17	DA	91880	6500	10	N	SP	2	1	0
2	17	DA	91880	6500	0	0	SP	2	2	0
2	17	DA	91880	6500	10	SE	PJ	2	3	0
2	17	DA	91880	6500	10	N	PJ	2	4	0
2	17	DA	91880	6500	10	N	PJ	2	5	0
2	17	DA	91880	6500	10	N	PJ	2	6	0
2	17	DA	91880	6500	10	N	PJ	2	7	0
2	17	DA	91880	6500	0	0	SP	2	8	0
2	17	DA	91880	6500	0	0	SB	2	9	0
2	17	DA	91880	6500	10	SE	PJ	2	10	0
2	24	PO	91980	6500	20	N	PJ	1	1	0
2	24	PO	91980	6500	10	SE	PJ	1	2	0
2	24	PO	91980	6500	10	SE	PJ	1	3	0
2	24	PO	91980	6500	10	0	SP	1	4	0
2	24	PO	91980	6500	10	N	PJ	1	5	0
2	24	PO	91980	6500	10	N	SP	1	6	0
2	24	PO	91980	6500	10	NW	SP	1	7	0
2	24	PO	91980	6500	10	NW	SP	1	8	0
2	24	PO	91980	6500	10	NW	SP	1	9	0
2	24	PO	91980	6500	10	0	SB	1	10	0
2	24	PO	91980	6500	10	NE	SP	2	1	1
2	24	PO	91980	6500	10	NE	SP	2	2	0
2	24	PO	91980	6500	10	N	SB	2	3	0
2	24	PO	91980	6500	10	SE	PJ	2	4	0
2	24	PO	91980	6500	10	SE	PJ	2	5	1
2	24	PO	91980	6500	10	E	PJ	2	6	0
2	24	PO	91980	6500	10	E	PJ	2	7	0
2	24	PO	91980	6500	10	N	PJ	2	8	0
2	24	PO	91980	6500	10	N	PJ	2	9	0
2	24	PO	91980	6500	10	N	PJ	2	10	0

PIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
2	6	PO	91980	6500	10	N	PJ	1	1	0
2	6	PO	91980	6500	10	NW	PJ	1	2	0
2	6	PO	91980	6500	10	NW	PJ	1	3	0
2	6	PO	91980	6500	20	N	MP	1	4	0
2	6	PO	91980	6500	20	S	PJ	1	5	0
2	6	PO	91980	6500	10	NW	PJ	1	6	0
2	6	PO	91980	6500	30	NW	MP	1	7	0
2	6	PO	91980	6500	10	N	SB	1	8	0
2	6	PO	91980	6500	10	0	SB	1	9	0
2	6	PO	91980	6500	10	S	SB	1	10	0
2	6	PO	91980	6500	10	E	SP	2	1	1
2	6	PO	91980	6500	10	SE	PJ	2	2	2
2	6	PO	91980	6500	10	NE	SP	2	3	0
2	6	PO	91980	6500	10	NE	PJ	2	4	0
2	6	PO	91980	6500	10	NE	PJ	2	5	0
2	6	PO	91980	6500	10	N	PJ	2	6	0
2	6	PO	91980	6500	10	NE	PJ	2	7	0
2	6	PO	91980	6500	20	E	MP	2	8	1
2	6	PO	91980	6500	20	E	MP	2	9	0
2	6	PO	91980	6500	20	N	PJ	2	10	0
2	15	DA	91980	7000	0	0	SP	1	1	1
2	15	DA	91980	6500	10	E	SP	1	2	0
2	15	DA	91980	7000	10	E	SP	1	3	0
2	15	DA	91980	7000	10	E	MP	1	4	0
2	15	DA	91980	7000	10	NW	MP	1	5	0
2	15	DA	91980	7000	10	NW	MP	1	6	0
2	15	DA	91980	7000	0	NW	MP	1	7	0
2	15	DA	91980	7000	5	NW	MP	1	8	1
2	15	DA	91980	7000	10	N	MP	1	9	0
2	15	DA	91980	7000	20	N	MP	1	10	0
2	15	DA	91980	7000	10	NW	SP	2	1	0
2	15	DA	91980	7000	10	NW	SP	2	2	0
2	15	DA	91980	7000	10	N	SP	2	3	0
2	15	DA	91980	7000	10	N	SP	2	4	0
2	15	DA	91980	6500	10	N	MP	2	5	0
2	15	DA	91980	6500	10	N	MP	2	6	1
2	15	DA	91980	6500	20	SW	MP	2	7	0
2	15	DA	91980	6500	10	NW	MP	2	8	0
2	15	DA	91980	6500	20	W	MP	2	9	0
2	15	DA	91980	6500	30	N	MP	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
1	31	BJ	92280	7500	10	SW	MB	1	1	0
1	31	BJ	92280	8000	20	S	MB	1	2	0
1	31	BJ	92280	8000	20	S	MB	1	3	0
1	31	BJ	92280	8000	10	SE	MB	1	4	0
1	31	BJ	92280	8000	20	NE	MB	1	5	0
1	31	BJ	92280	8000	30	NW	MB	1	6	0
1	31	BJ	92280	8000	30	N	MB	1	7	0
1	31	BJ	92280	8000	30	NE	MB	1	8	0
1	31	BJ	92280	7500	40	NE	MB	1	9	0
1	31	BJ	92280	7500	40	NE	MB	1	10	0
1	31	BJ	92280	7500	10	SW	MB	2	1	0
1	31	BJ	92280	7500	30	SW	MB	2	2	0
1	31	BJ	92280	7500	10	E	SB	2	3	0
1	31	BJ	92280	7500	20	SE	MB	2	4	0
1	31	BJ	92280	7500	20	SE	MB	2	5	0
1	31	BJ	92280	7500	30	SE	MB	2	6	0
1	31	BJ	92280	7500	0	0	MB	2	7	0
1	31	BJ	92280	7500	10	N	MB	2	8	0
1	31	BJ	92280	8000	30	N	MB	2	9	0
1	31	BJ	92280	8000	30	N	MB	2	10	0
2	5	DA	91980	6500	10	N	MP	1	1	0
2	5	DA	91980	6500	0	0	SB	1	2	0
2	5	DA	91980	6500	0	0	SB	1	3	0
2	5	DA	91980	6500	0	0	SB	1	4	0
2	5	DA	91980	6500	20	E	SB	1	5	0
2	5	DA	91980	6500	40	SW	MP	1	6	0
2	5	DA	91980	6500	30	S	MP	1	7	0
2	5	DA	91980	6500	10	S	MP	1	8	0
2	5	DA	91980	6500	0	0	MP	1	9	1
2	5	DA	91980	6500	20	NE	MP	1	10	0
2	5	DA	91980	6500	20	N	MP	2	1	0
2	5	DA	91980	6500	20	N	PJ	2	2	0
2	5	DA	91980	6500	20	N	MP	2	3	0
2	5	DA	91980	6500	10	N	MB	2	4	0
2	5	DA	91980	6500	0	0	SB	2	5	0
2	5	DA	91980	6500	0	0	SB	2	6	0
2	5	DA	91980	6500	0	0	SB	2	7	0
2	5	DA	91980	6500	30	SW	MP	2	8	0
2	5	DA	91980	6500	10	SE	MP	2	9	0
2	5	DA	91980	6500	10	SE	PJ	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
1	23	BJ	92380	7000	10	W	MB	1	1	0
1	23	BJ	92380	7000	10	SE	MB	1	2	0
1	23	BJ	92380	7000	10	E	MB	1	3	0
1	23	BJ	92380	7000	40	NE	MB	1	4	1
1	23	BJ	92380	7000	10	NE	MB	1	5	0
1	23	BJ	92380	7000	10	S	SB	1	6	0
1	23	BJ	92380	7000	10	SW	OT	1	7	0
1	23	BJ	92380	7000	10	SW	SP	1	8	0
1	23	BJ	92380	7000	20	S	MP	1	9	0
1	23	BJ	92380	7000	10	O	MP	1	10	0
1	23	BJ	92380	7000	30	S	MP	2	1	0
1	23	BJ	92380	7000	20	NE	MB	2	2	0
1	23	BJ	92380	7000	50	S	MB	2	3	0
1	23	BJ	92380	7000	10	S	SP	2	4	0
1	23	BJ	92380	7000	40	W	SP	2	5	0
1	23	BJ	92380	7000	40	SW	MP	2	6	0
1	23	BJ	92380	7000	30	SW	MP	2	7	0
1	23	BJ	92380	7000	10	S	SP	2	8	0
1	23	BJ	92380	7000	10	S	MP	2	9	0
1	23	BJ	92380	7000	20	N	MP	2	10	0
1	26	WJ	92180	7500	20	S	MB	1	1	0
1	26	WJ	92180	7500	20	S	MB	1	2	0
1	26	WJ	92180	7500	10	N	MB	1	3	0
1	26	WJ	92180	7500	40	N	MB	1	4	0
1	26	WJ	92180	7500	50	N	MB	1	5	0
1	26	WJ	92180	7500	50	N	MB	1	6	0
1	26	WJ	92180	7500	50	N	MB	1	7	0
1	26	WJ	92180	7500	20	N	MB	1	8	0
1	26	WJ	92180	7500	10	S	SB	1	9	0
1	26	WJ	92180	7500	50	S	MB	1	10	0
1	26	WJ	92180	7500	40	NW	MB	2	1	0
1	26	WJ	92180	7500	30	NW	MB	2	2	0
1	26	WJ	92180	7500	20	SE	SB	2	3	0
1	26	WJ	92180	7500	30	SE	OT	2	4	0
1	26	WJ	92180	7500	10	S	MB	2	5	0
1	26	WJ	92180	7000	10	O	MB	2	6	0
1	26	WJ	92180	7000	50	N	MB	2	7	0
1	26	WJ	92180	7000	50	N	MB	2	8	0
1	26	WJ	92180	7000	0	N	SB	2	9	0
1	26	WJ	92180	7000	50	S	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN-SECT	PLOT	PELLET COUNT
1	16	BJ	92380	7500	10	E	MB	1	1	3
1	16	BJ	92380	7500	50	SE	MB	1	2	0
1	16	BJ	92380	7500	50	NE	MB	1	3	0
1	16	BJ	92380	7500	30	SE	MB	1	4	0
1	16	BJ	92380	7500	20	E	MB	1	5	0
1	16	BJ	92380	7500	10	S	MB	1	6	1
1	16	BJ	92380	7500	20	SW	MP	1	7	0
1	16	BJ	92380	7500	20	S	MP	1	8	0
1	16	BJ	92380	7500	10	SE	MP	1	9	0
1	16	BJ	92380	7500	10	S	MP	1	10	0
1	16	BJ	92380	7000	30	S	MP	2	1	0
1	16	BJ	92380	7000	10	N	MB	2	2	0
1	16	BJ	92380	7500	20	SW	MB	2	3	0
1	16	BJ	92380	7500	30	SW	MP	2	4	0
1	16	BJ	92380	7500	10	W	SB	2	5	0
1	16	BJ	92380	7500	10	0	MP	2	6	0
1	16	BJ	92380	7500	10	0	MP	2	7	0
1	16	BJ	92380	7500	10	0	MP	2	8	0
1	16	BJ	92380	7500	10	NE	MB	2	9	0
1	16	BJ	92380	7500	10	E	MB	2	10	0
1	20	WJ	92180	7500	0	0	SB	1	1	0
1	20	WJ	92180	7500	50	S	MB	1	2	0
1	20	WJ	92180	7500	50	SW	MB	1	3	0
1	20	WJ	92180	7500	20	SW	OT	1	4	0
1	20	WJ	92180	7500	20	SW	MB	1	5	0
1	20	WJ	92180	7500	20	W	MB	1	6	0
1	20	WJ	92180	7500	30	W	MB	1	7	0
1	20	WJ	92180	7500	20	SE	MB	1	8	0
1	20	WJ	92180	7500	20	S	MB	1	9	0
1	20	WJ	92180	7500	20	S	MB	1	10	0
1	20	WJ	92180	7500	50	W	MB	2	1	0
1	20	WJ	92180	7500	50	W	OT	2	2	0
1	20	WJ	92180	7500	40	W	OT	2	3	0
1	20	WJ	92180	7500	40	W	OT	2	4	0
1	20	WJ	92180	7500	30	W	MB	2	5	0
1	20	WJ	92180	7500	30	SW	MB	2	6	1
1	20	WJ	92180	7500	30	S	MB	2	7	0
1	20	WJ	92180	7500	30	S	MB	2	8	0
1	20	WJ	92180	7500	20	S	MB	2	9	0
1	20	WJ	92180	7500	10	SE	MB	2	10	0

RIO BLANCO OIL SHALE COMPANY
MULE DEER PELLET COUNT - FALL 1980

BLK	SAMPLE UNIT	OBSER	DATE	ELEVA	SLOPE	ASPECT	VEG TYPE	TRAN- SECT	PLOT	PELLET COUNT
1	5	WJ	92380	7000	20	SE	MP	1	1	0
1	5	WJ	92380	7000	20	SE	MP	1	2	0
1	5	WJ	92380	7000	20	SE	MP	1	3	0
1	5	WJ	92380	7000	20	S	MP	1	4	0
1	5	WJ	92380	7000	10	SE	UT	1	5	0
1	5	WJ	92380	7000	10	SE	MB	1	6	0
1	5	WJ	92380	7000	10	E	MP	1	7	0
1	5	WJ	92380	7000	10	NE	MB	1	8	0
1	5	WJ	92380	7000	10	N	MB	1	9	0
1	5	WJ	92380	7000	20	N	MB	1	10	0
1	5	WJ	92380	7000	30	N	MB	2	1	1
1	5	WJ	92380	7000	10	NW	SB	2	2	0
1	5	WJ	92380	7000	10	SE	SB	2	3	0
1	5	WJ	92380	7000	20	E	MB	2	4	0
1	5	WJ	92380	7000	50	S	MB	2	5	0
1	5	WJ	92380	7000	10	E	SP	2	6	0
1	5	WJ	92380	7000	10	E	MP	2	7	0
1	5	WJ	92380	7000	10	E	MP	2	8	1
1	5	WJ	92380	7000	20	SE	MP	2	9	1
1	5	WJ	92380	7000	10	SE	MP	2	10	0
1	11	WJ	92380	7000	20	E	MB	1	1	0
1	11	WJ	92380	7000	20	E	MB	1	2	0
1	11	WJ	92380	7000	10	N	MB	1	3	0
1	11	WJ	92380	7000	10	SE	SB	1	4	0
1	11	WJ	92380	7000	20	S	MP	1	5	0
1	11	WJ	92380	7000	20	SE	MB	1	6	0
1	11	WJ	92380	7000	20	SE	MB	1	7	0
1	11	WJ	92380	7000	10	NW	MB	1	8	0
1	11	WJ	92380	7000	20	NW	MB	1	9	0
1	11	WJ	92380	7000	10	N	MB	1	10	0
1	11	WJ	92380	7000	10	N	MB	2	1	0
1	11	WJ	92380	7000	10	0	MB	2	2	0
1	11	WJ	92380	7000	10	N	MP	2	3	0
1	11	WJ	92380	7000	10	NW	MP	2	4	0
1	11	WJ	92380	7000	10	0	MP	2	5	0
1	11	WJ	92380	7000	10	NW	MP	2	6	0
1	11	WJ	92380	7000	20	N	MB	2	7	0
1	11	WJ	92380	7000	20	N	MB	2	8	0
1	11	WJ	92380	7000	10	0	SB	2	9	0
1	11	WJ	92380	7000	10	E	SB	2	10	0

APPENDIX 3-2.3

Mule Deer Pellet Group Data for Fall 1980
by Block, Sample Unit and Plot

RIO BLANCO OIL SHALE COMPANY - AVIFAUNA STUDIES - 1980

DATE SAMPLED	VEGETATION TYPE	AREA NUM	TRANSECT NUMBER	SPECIES CODE	NUMBER OF BIRDS	OBSE-RVER	TIME
60580	SB	6	A	ORE MON	2	WJC	833
60580	SB	6	A	CHL CHL	2	WJC	833
60580	SB	6	A	SIA CUR	1	WJC	833
60780	SB	6	A	CHL CHL	2	WJC	840
60780	SB	6	A	FAL SPA	1	WJC	840
60780	SB	6	A	SPI BRE	5	WJC	840
60780	SB	6	A	ORE MON	1	WJC	840
60780	SB	6	A	POO GRA	2	WJC	840
60380	SB	6	B	SPI BRE	10	WJC	620
60380	SB	6	B	POO GRA	1	WJC	620
60380	SB	6	B	CHL CHL	4	WJC	620
60380	SB	6	B	MOL ATE	1	WJC	620
60380	SB	6	B	SIA CUR	1	WJC	620
60580	SB	6	B	SPI BRE	10	WJC	620
60580	SB	6	B	SIA CUR	1	WJC	620
60580	SB	6	B	CHL CHL	3	WJC	620
60580	SB	6	B	POL CAE	1	WJC	620
60580	SB	6	B	SEL PLA	1	WJC	620
60780	SB	6	B	SPI BRE	7	WJC	620
60780	SB	6	B	CHL CHL	3	WJC	620
60780	SB	6	B	POL CAE	1	WJC	620
60780	SB	6	B	SIA CUR	2	WJC	620

RIO BLANCO OIL SHALE COMPANY - AVIFAUNA STUDIES - 1980

DATE SAMPLED	VEGETATION TYPE	AREA NUM	TRANSECT NUMBER	SPECIES CODE	NUMBER OF BIRDS	OBSE-RVER	TIME
60780	PJ	6	A	SPI PAS	2	WJC	750
60780	PJ	6	A	CHL CHL	1	WJC	750
60780	PJ	6	A	SIT CAR	1	WJC	750
60380	PJ	6	B	COR COR	2	WJC	720
60380	PJ	6	B	DEN NIG	1	WJC	720
60380	PJ	6	B	GYM CYA	2	WJC	720
60380	PJ	6	B	CHL CHL	1	WJC	720
60380	PJ	6	B	SPI PAS	2	WJC	720
60580	PJ	6	B	PAR GAM	1	WJC	710
60580	PJ	6	B	GYM CYA	5	WJC	710
60580	PJ	6	B	DEN NIG	3	WJC	710
60580	PJ	6	B	SPI PAS	1	WJC	710
60580	PJ	6	B	CHL CHL	1	WJC	710
60580	PJ	6	B	SIA CUR	1	WJC	710
60780	PJ	6	B	PAR GAM	1	WJC	710
60780	PJ	6	B	NUC COL	1	WJC	710
60780	PJ	6	B	CHL CHL	2	WJC	710
60780	PJ	6	B	SEL PAL	1	WJC	710
60480	SB	5	A	CHL CHL	2	WJC	712
60480	SB	5	A	SPI BRE	6	WJC	712
60480	SB	5	A	ORE MON	1	WJC	712
60280	SB	5	A	SPI BRE	8	WJC	722
60280	SB	5	A	MOL ATE	3	WJC	722
60280	SB	5	A	CHL CHL	2	WJC	722
60680	SB	5	A	CHL CHL	2	WJC	655
60680	SB	5	A	SPI BRE	8	WJC	655
60680	SB	5	A	COR COR	1	WJC	655
60680	SB	5	A	MOL ATE	1	WJC	655
60680	SB	5	A	ORE MON	1	WJC	655
60480	SB	5	B	CHL CHL	1	WJC	740
60480	SB	5	B	SPI BRE	2	WJC	740
60280	SB	5	B	CHL CHL	1	WJC	755
60280	SB	5	B	SPI BRE	4	WJC	755
60280	SB	5	B	ORE MON	1	WJC	755
60680	SB	5	B	CHL CHL	1	WJC	735
60680	SB	5	B	SPI BRE	2	WJC	735
60380	SB	6	A	CHL CHL	3	WJC	840
60380	SB	6	A	SPI BRE	3	WJC	840
60380	SB	6	A	PDO GRA	2	WJC	840
60580	SB	6	A	SPI BRE	3	WJC	833

RIO BLANCO OIL SHALE COMPANY - AVIFAUNA STUDIES - 1980

DATE SAMPLED	VEGETATION TYPE	AREA NUM	TRANSECT NUMBER	SPECIES CODE	NUMBER OF BIRDS	OBSE-RVER	TIME
60480	PJ	5	A	PAR GAM	3	WJC	615
60480	PJ	5	A	SPI PAS	3	WJC	615
60480	PJ	5	A	CHO MIN	1	WJC	615
60480	PJ	5	A	PIR LUD	1	WJC	615
60480	PJ	5	A	DEN NIG	1	WJC	615
60480	PJ	5	A	POL CAE	2	WJC	615
60480	PJ	5	A	SPI BRE	1	WJC	615
60280	PJ	5	A	DEN NIG	1	WJC	620
60280	PJ	5	A	CHL CHL	2	WJC	620
60280	PJ	5	A	SPI BRE	1	WJC	620
60280	PJ	5	A	POL CAE	1	WJC	620
60680	PJ	5	A	POL CAE	1	WJC	610
60680	PJ	5	A	PAR GAM	1	WJC	610
60680	PJ	5	A	MOL ATE	1	WJC	610
60680	PJ	5	A	PIP ERY	1	WJC	610
60480	PJ	5	B	PIP ERY	1	WJC	803
60480	PJ	5	B	SPI PAS	1	WJC	803
60480	PJ	5	B	SIA CUR	2	WJC	803
60480	PJ	5	B	CHL CHL	1	WJC	803
60480	PJ	5	B	DEN NIG	2	WJC	803
60480	PJ	5	B	CHO MIN	1	WJC	803
60280	PJ	5	B	SPI BRE	3	WJC	820
60280	PJ	5	B	SIA CUR	3	WJC	820
60280	PJ	5	B	CIR CYA	1	WJC	820
60280	PJ	5	B	DEN NIG	1	WJC	820
60280	PJ	5	B	PAR GAM	1	WJC	820
60680	PJ	5	B	ZEN MAC	2	WJC	800
60680	PJ	5	B	CHL CHL	1	WJC	800
60680	PJ	5	B	SIA CUR	2	WJC	800
60680	PJ	5	B	SPI BRE	1	WJC	800
60680	PJ	5	B	POL CAE	1	WJC	800
60380	PJ	6	A	SPI PAS	4	WJC	805
60380	PJ	6	A	CHL CHL	1	WJC	805
60580	PJ	6	A	GYM CYA	20	WJC	750
60580	PJ	6	A	DEN NIG	1	WJC	750
60580	PJ	6	A	APH COE	3	WJC	750
60580	PJ	6	A	SPI PAS	1	WJC	750
60580	PJ	6	A	SIT CAR	1	WJC	750
60580	PJ	6	A	CHL CHL	1	WJC	750
60780	PJ	6	A	NUC COL	2	WJC	750

Avifauna Species List
RBOSC - 1980

Code	Scientific Name	Common Name
APHCOE	*Aphelocoma coerulescens*	Scrub Jay
CHLCHL	*Chlorura chlorura*	Green-tailed Towhee
CHOMIN	*Chordeiles minor*	Common Nighthawk
CIRCYA	*Circus cyaneus*	Marsh Hawk
CORCOR	*Corvus corax*	Common Raven
DENNIG	*Dendroica nigrescens*	Black-throated Gray Warbler
FALSPA	*Falco sparverius*	American Kestrel
GYMCYA	*Gymnorhinus cyanocephala*	Pinon Jay
MOLATE	*Molothrus ater*	Brown-headed Cowbird
NUCCOL	*Nucifraga columbiana*	Clark's Nutcracker
OREMON	*Oreoscoptes montanus*	Sage Thrasher
PARGAM	*Parus gambeli*	Mountain Chickadee
PIPERY	*Pipilo erythrophthalmus*	Rufous-sided Towhee
PIRLUD	*Piranga ludoviciana*	Western Tanager
POLCAE	*Polioptila caerulea*	Blue-gray Gnatcatcher
POOGRA	*Pooecetes gramineus*	Vesper Sparrow
SELPLA	*Selasphorus platycercus*	Broad-tailed Hummingbird
SIACUR	*Sialia currucoides*	Mountain Bluebird
SITCAR	*Sitta carolinensis*	White-breasted Nuthatch
SPIBRE	*Spizella breweri*	Brewer's Sparrow
SPIPAS	*Spizella passerina*	Chipping Sparrow
ZENMAC	*Zenaidura macroura*	Mourning Dove

APPENDIX 3-2.2

Avifauna Sightings for 1980 by Date, Transect, Habitat and Area

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	SB6	C	1 7		.	.				.
61180	SB6	C	1 8		.	.				.
61280	SB6	C	1 8	PER MAN	16	1	M	A		.
61380	SB6	C	1 8	PER MAN	11	2	M	A		.
61180	SB6	C	1 9	PER MAN	11	1	M	A		.
61280	SB6	C	1 9	EUT MIN	11	1	F	A		.
61380	SB6	C	1 9		.	.				.
61180	SB6	C	110	PER MAN	8	1	M	A		.
61280	SB6	C	110	EUT MIN	8	1	F	A		.
61380	SB6	C	110		.	.				.
61180	SB6	C	2 1		.	.				.
61280	SB6	C	2 1		.	.				.
61380	SB6	C	2 1		.	.				.
61180	SB6	C	2 2		.	.				.
61280	SB6	C	2 2	PER MAN	12	2	F	A		.
61380	SB6	C	2 2		.	.				.
61180	SB6	C	2 3		.	.				.
61280	SB6	C	2 3		.	.				.
61380	SB6	C	2 3		.	.				.
61180	SB6	C	2 4		.	.				.
61280	SB6	C	2 4	PER MAN	15	1	M	A		.
61380	SB6	C	2 4	PER MAN	3	3	M	A	A	.
61180	SB6	C	2 5		.	.				.
61280	SB6	C	2 5		.	.				.
61380	SB6	C	2 5		.	.				.
61180	SB6	C	2 6	EUT MIN	2	1	F	A	P	.
61280	SB6	C	2 6		.	.				.
61380	SB6	C	2 6	PER MAN	6	3	F	A		.
61180	SB6	C	2 7	PER MAN	6	1	F	A		.
61280	SB6	C	2 7	PER MAN	6	2	F	A		.
61380	SB6	C	2 7	PER MAN	4	3	F	A		.
61180	SB6	C	2 8		.	.				.
61280	SB6	C	2 8	EUT MIN	7	1	M	A	A	.
61380	SB6	C	2 8		.	.				.
61180	SB6	C	2 9	PER MAN	7	1	M	A		.
61280	SB6	C	2 9	PER MAN	7	2	M	A		.
61380	SB6	C	2 9	PER MAN	15	2	M	A		.
61180	SB6	C	210		.	.				.
61280	SB6	C	210		.	.				.
61380	SB6	C	210	EUT MIN	0	1	M	A	A	.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61280	SB6	B	2 4	PER MAN	5	2	F	A		.
61380	SB6	B	2 4		.	.				.
61180	SB6	B	2 5		.	.				.
61280	SB6	B	2 5		.	.				.
61380	SB6	B	2 5		.	.				.
61180	SB6	B	2 6		.	.				.
61280	SB6	B	2 6		.	.				.
61380	SB6	B	2 6		.	.				.
61180	SB6	B	2 7		.	.				.
61280	SB6	B	2 7		.	.				.
61380	SB6	B	2 7		.	.				.
61180	SB6	B	2 8		.	.				.
61280	SB6	B	2 8		.	.				.
61380	SB6	B	2 8		.	.				.
61180	SB6	B	2 9		.	.				.
61280	SB6	B	2 9		.	.				.
61380	SB6	B	2 9		.	.				.
61180	SB6	B	210		.	.				.
61280	SB6	B	210		.	.				.
61380	SB6	B	210	PER MAN	21	1	M	A	A	79
61180	SB6	C	1 1		.	.				.
61280	SB6	C	1 1		.	.				.
61380	SB6	C	1 1	PER MAN	12	3	F	A		.
61180	SB6	C	1 2	PER MAN	12	1	F	A		.
61280	SB6	C	1 2	PER MAN	17	1	F	A	P	.
61380	SB6	C	1 2		.	.				.
61180	SB6	C	1 3		.	.				.
61280	SB6	C	1 3		.	.				.
61380	SB6	C	1 3		.	.				.
61180	SB6	C	1 4		.	.				.
61280	SB6	C	1 4		.	.				.
61380	SB6	C	1 4	PER MAN	16	2	M	A		.
61180	SB6	C	1 5		.	.				.
61280	SB6	C	1 5		.	.				.
61380	SB6	C	1 5		.	.				.
61180	SB6	C	1 6		.	.				.
61280	SB6	C	1 6		.	.				.
61380	SB6	C	1 6		.	.				.
61180	SB6	C	1 7		.	.				.
61280	SB6	C	1 7		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61180	SB6	B	1 1	PER MAN	5	1	F	A		.
61280	SB6	B	1 1	PER MAN	3	2	M	A	A	.
61380	SB6	B	1 1	PER MAN	13	2	M	A		.
61180	SB6	B	1 2		.	.				.
61280	SB6	B	1 2	PER MAN	14	1	M	A		.
61380	SB6	B	1 2		.	.				.
61180	SB6	B	1 3	PER MAN	4	1	F	A		.
61280	SB6	B	1 3	PER MAN	4	2	F	A		.
61380	SB6	B	1 3		.	.				.
61180	SB6	B	1 4		.	.				.
61280	SB6	B	1 4	EUT MIN	6	1	F	A		.
61380	SB6	B	1 4		.	.				.
61180	SB6	B	1 5		.	.				.
61280	SB6	B	1 5		.	.				.
61380	SB6	B	1 5		.	.				.
61180	SB6	B	1 6		.	.				.
61280	SB6	B	1 6		.	.				.
61380	SB6	B	1 6		.	.				.
61180	SB6	B	1 7		.	.				.
61280	SB6	B	1 7		.	.				.
61380	SB6	B	1 7	PER MAN	14	2	M	A		.
61180	SB6	B	1 8		.	.				.
61280	SB6	B	1 8		.	.				.
61380	SB6	B	1 8	PER MAN	7	3	M	A		.
61180	SB6	B	1 9		.	.				.
61280	SB6	B	1 9		.	.				.
61380	SB6	B	1 9		.	.				.
61180	SB6	B	110		.	.				.
61280	SB6	B	110		.	.				.
61380	SB6	B	110	PER MAN	22	1	F	A	P	.
61180	SB6	B	2 1		.	.				.
61280	SB6	B	2 1	PER MAN	13	1	M	A		.
61380	SB6	B	2 1	PER MAN	5	3	F	A		.
61180	SB6	B	2 2		.	.				.
61280	SB6	B	2 2		.	.				.
61380	SB6	B	2 2	EUT MIN	12	1	F	A	P	.
61180	SB6	B	2 3		.	.				.
61280	SB6	B	2 3		.	.				.
61380	SB6	B	2 3		.	.				.
61180	SB6	B	2 4	EUT MIN	1	1	F	A	P	.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	SB6	A	1 7		.	.				.
61180	SB6	A	1 8		.	.				.
61280	SB6	A	1 8	EUT MIN	5	1	F	A	P	.
61380	SB6	A	1 8		.	.				.
61180	SB6	A	1 9		.	.				.
61280	SB6	A	1 9		.	.				.
61380	SB6	A	1 9	PER MAN	2	3	F	A	P	.
61180	SB6	A	110		.	.				.
61280	SB6	A	110		.	.				.
61380	SB6	A	110		.	.				.
61180	SB6	A	2 1		.	.				.
61280	SB6	A	2 1		.	.				.
61380	SB6	A	2 1		.	.				.
61180	SB6	A	2 2		.	.				.
61280	SB6	A	2 2		.	.				.
61380	SB6	A	2 2		.	.				.
61180	SB6	A	2 3	PER MAN	1	1	F	A		.
61280	SB6	A	2 3	PER MAN	1	2	F	A		.
61380	SB6	A	2 3		.	.				.
61180	SB6	A	2 4		.	.				.
61280	SB6	A	2 4	EUT MIN	3	1	M	A		.
61380	SB6	A	2 4		.	.				.
61180	SB6	A	2 5		.	.				.
61280	SB6	A	2 5	EUT MIN	4	1	M	A	A	.
61380	SB6	A	2 5		.	.				.
61180	SB6	A	2 6		.	.				.
61280	SB6	A	2 6		.	.				.
61380	SB6	A	2 6		.	.				.
61180	SB6	A	2 7		.	.				.
61280	SB6	A	2 7		.	.				.
61380	SB6	A	2 7		.	.				.
61180	SB6	A	2 8		.	.				.
61280	SB6	A	2 8		.	.				.
61380	SB6	A	2 8		.	.				.
61180	SB6	A	2 9	PER MAN	2	1	F	A	P	.
61280	SB6	A	2 9	PER MAN	2	2	F	A	P	.
61380	SB6	A	2 9		.	.				.
61180	SB6	A	210		.	.				.
61280	SB6	A	210		.	.				.
61380	SB6	A	210		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61280	SB5	C	2 4		.	.				.
61380	SB5	C	2 4	EUT MIN	14	1	F	A	P	.
61180	SB5	C	2 5		.	.				.
61280	SB5	C	2 5	PER MAN	17	1	M	A		.
61380	SB5	C	2 5	PER MAN	7	3	M	A	A	.
61180	SB5	C	2 6		.	.				.
61280	SB5	C	2 6		.	.				.
61380	SB5	C	2 6		.	.				.
61180	SB5	C	2 7		.	.				.
61280	SB5	C	2 7	PER MAN	18	1	M	A	A	.
61380	SB5	C	2 7	PER MAN	21	2	F	A	P	.
61180	SB5	C	2 8		.	.				.
61280	SB5	C	2 8		.	.				.
61380	SB5	C	2 8		.	.				.
61180	SB5	C	2 9		.	.				.
61280	SB5	C	2 9		.	.				.
61380	SB5	C	2 9		.	.				.
61180	SB5	C	210		.	.				.
61280	SB5	C	210	PER MAN	21	1	F	A	P	.
61380	SB5	C	210	PER MAN	17	2	M	A		.
61180	SB6	A	1 1	PER MAN	3	1	M	A	A	.
61280	SB6	A	1 1		.	.				.
61380	SB6	A	1 1		.	.				.
61180	SB6	A	1 2		.	.				.
61280	SB6	A	1 2		.	.				.
61380	SB6	A	1 2	PER MAN	18	1	M	J		.
61180	SB6	A	1 3		.	.				.
61280	SB6	A	1 3		.	.				.
61380	SB6	A	1 3		.	.				.
61180	SB6	A	1 4		.	.				.
61280	SB6	A	1 4		.	.				.
61380	SB6	A	1 4	REIMEG	1	1	M	A	A	.
61180	SB6	A	1 5		.	.				.
61280	SB6	A	1 5		.	.				.
61380	SB6	A	1 5		.	.				.
61180	SB6	A	1 6		.	.				.
61280	SB6	A	1 6		.	.				.
61380	SB6	A	1 6		.	.				.
61180	SB6	A	1 7		.	.				.
61280	SB6	A	1 7		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61180	SB5	C	1 1	PER MAN	8	1	F	A	P	.
61280	SB5	C	1 1		.	.				.
61380	SB5	C	1 1		.	.				.
61180	SB5	C	1 2	EUT MIN	2	1	F	A	P	.
61280	SB5	C	1 2		.	.				.
61380	SB5	C	1 2		.	.				.
61180	SB5	C	1 3		.	.				.
61280	SB5	C	1 3	PER MAN	8	2	F	A	P	.
61380	SB5	C	1 3		.	.				.
61180	SB5	C	1 4		.	.				.
61280	SB5	C	1 4		.	.				.
61380	SB5	C	1 4	EUT MIN	15	1	F	A	P	.
61180	SB5	C	1 5		.	.				.
61280	SB5	C	1 5	EUT MIN	0	1	M	A	A	.
61380	SB5	C	1 5	EUT MIN	17	1	M	A	A	.
61180	SB5	C	1 6		.	.				.
61280	SB5	C	1 6		.	.				.
61380	SB5	C	1 6		.	.				.
61180	SB5	C	1 7		.	.				.
61280	SB5	C	1 7	PER MAN	5	1	F	A	P	79
61380	SB5	C	1 7	PER MAN	5	2	F	A	P	79
61180	SB5	C	1 8	PER MAN	7	1	M	A	A	.
61280	SB5	C	1 8	PER MAN	7	2	M	A	A	.
61380	SB5	C	1 8		.	.				.
61180	SB5	C	1 9		.	.				.
61280	SB5	C	1 9		.	.				.
61380	SB5	C	1 9		.	.				.
61180	SB5	C	110		.	.				.
61280	SB5	C	110		.	.				.
61380	SB5	C	110	EUT MIN	16	1	M	A	A	.
61180	SB5	C	2 1	PER MAN	6	1	M	A	A	.
61280	SB5	C	2 1	EUT MIN	7	1	M	A	A	.
61380	SB5	C	2 1		.	.				.
61180	SB5	C	2 2		.	.				.
61280	SB5	C	2 2	PER MAN	16	1	F	J		.
61380	SB5	C	2 2		.	.				.
61180	SB5	C	2 3		.	.				.
61280	SB5	C	2 3	EUT MIN	8	1	F	A	P	.
61380	SB5	C	2 3		.	.				.
61180	SB5	C	2 4		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	SB5	B	1 7		.	.				.
61180	SB5	B	1 8	PER MAN	4	1	M	J		.
61280	SB5	B	1 8		.	.				.
61380	SB5	B	1 8	PER MAN	18	2	M	A	A	.
61180	SB5	B	1 9		.	.				.
61280	SB5	B	1 9		.	.				.
61380	SB5	B	1 9	PER MAN	25	1	M	A	A	.
61180	SB5	B	110		.	.				.
61280	SB5	B	110		.	.				.
61380	SB5	B	110	PER MAN	0	1	F	A		.
61180	SB5	B	2 1	EUT MIN	1	1	F	A	P	.
61280	SB5	B	2 1		.	.				.
61380	SB5	B	2 1		.	.				.
61180	SB5	B	2 2		.	.				.
61280	SB5	B	2 2		.	.				.
61380	SB5	B	2 2		.	.				.
61180	SB5	B	2 3		.	.				.
61280	SB5	B	2 3		.	.				.
61380	SB5	B	2 3		.	.				.
61180	SB5	B	2 4		.	.				.
61280	SB5	B	2 4		.	.				.
61380	SB5	B	2 4	PER MAN	2	3	F	A	P	.
61180	SB5	B	2 5		.	.				.
61280	SB5	B	2 5		.	.				.
61380	SB5	B	2 5		.	.				.
61180	SB5	B	2 6		.	.				.
61280	SB5	B	2 6		.	.				.
61380	SB5	B	2 6	EUT MIN	13	1	M	A		.
61180	SB5	B	2 7	PER MAN	3	1	M	J		.
61280	SB5	B	2 7		.	.				.
61380	SB5	B	2 7		.	.				.
61180	SB5	B	2 8		.	.				.
61280	SB5	B	2 8	PER MAN	3	2	M	J		.
61380	SB5	B	2 8	PER MAN	26	1	M	J		.
61180	SB5	B	2 9		.	.				.
61280	SB5	B	2 9	PER MAN	4	2	M	J		.
61380	SB5	B	2 9	PER MAN	24	1	M	A		.
61180	SB5	B	210		.	.				.
61280	SB5	B	210		.	.				.
61380	SB5	B	210		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61280	SB5	A	2 4	EUT MIN	4	1	M	A	A	.
61380	SB5	A	2 4		.	.				.
61180	SB5	A	2 5		.	.				.
61280	SB5	A	2 5	PER MAN	1	2	M	A		.
61380	SB5	A	2 5	PER MAN	13	2	M	J		.
61180	SB5	A	2 6		.	.				.
61280	SB5	A	2 6	PER MAN	11	1	F	A	P	.
61380	SB5	A	2 6		.	.				.
61180	SB5	A	2 7	PER MAN	1	1	M	A		.
61280	SB5	A	2 7	PER MAN	12	1	M	J		.
61380	SB5	A	2 7		.	.				.
61180	SB5	A	2 8		.	.				.
61280	SB5	A	2 8		.	.				.
61380	SB5	A	2 8		.	.				.
61180	SB5	A	2 9		.	.				.
61280	SB5	A	2 9	PER MAN	13	1	M	J		.
61380	SB5	A	2 9		.	.				.
61180	SB5	A	210		.	.				.
61280	SB5	A	210		.	.				.
61380	SB5	A	210	PER MAN	4	3	M	J		.
61180	SB5	B	1 1		.	.				.
61280	SB5	B	1 1		.	.				.
61380	SB5	B	1 1		.	.				.
61180	SB5	B	1 2		.	.				.
61280	SB5	B	1 2	PER MAN	15	1	M	A	A	.
61380	SB5	B	1 2		.	.				.
61180	SB5	B	1 3		.	.				.
61280	SB5	B	1 3		.	.				.
61380	SB5	B	1 3	PER MAN	6	2	M	A	A	.
61180	SB5	B	1 4	PER MAN	5	1	F	A	P	.
61280	SB5	B	1 4	PER MAN	5	2	F	A	P	.
61380	SB5	B	1 4	PER MAN	5	3	F	A	P	.
61180	SB5	B	1 5		.	.				.
61280	SB5	B	1 5		.	.				.
61380	SB5	B	1 5		.	.				.
61180	SB5	B	1 6		.	.				.
61280	SB5	B	1 6		.	.				.
61380	SB5	B	1 6		.	.				.
61180	SB5	B	1 7		.	.				.
61280	SB5	B	1 7		.	.				.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61180	SB5	A	1 1		.	.				.
61280	SB5	A	1 1		.	.				.
61380	SB5	A	1 1	EUT MIN	11	1	F	A	P	.
61180	SB5	A	1 2		.	.				.
61280	SB5	A	1 2	EUT MIN	2	1	M	A		79
61380	SB5	A	1 2	EUT MIN	12	1	M	A		.
61180	SB5	A	1 3		.	.				.
61280	SB5	A	1 3	EUT MIN	5	1	M	A		.
61380	SB5	A	1 3		.	.				.
61180	SB5	A	1 4	PER MAN	2	1	F	A	P	.
61280	SB5	A	1 4	PER MAN	2	2	F	A	P	.
61380	SB5	A	1 4		.	.				.
61180	SB5	A	1 5		.	.				.
61280	SB5	A	1 5		.	.				.
61380	SB5	A	1 5	PER MAN	11	2	F	A	P	.
61180	SB5	A	1 6		.	.				.
61280	SB5	A	1 6		.	.				.
61380	SB5	A	1 6	PER MAN	1	3	M	A		.
61180	SB5	A	1 7		.	.				.
61280	SB5	A	1 7	PER MAN	14	1	M	J		.
61380	SB5	A	1 7	PER MAN	12	2	M	J		.
61180	SB5	A	1 8		.	.				.
61280	SB5	A	1 8		.	.				.
61380	SB5	A	1 8	PER MAN	23	1	M	J		.
61180	SB5	A	1 9		.	.				.
61280	SB5	A	1 9		.	.				.
61380	SB5	A	1 9		.	.				.
61180	SB5	A	110		.	.				.
61280	SB5	A	110		.	.				.
61380	SB5	A	110		.	.				.
61180	SB5	A	2 1		.	.				.
61280	SB5	A	2 1		.	.				.
61380	SB5	A	2 1		.	.				.
61180	SB5	A	2 2		.	.				.
61280	SB5	A	2 2		.	.				.
61380	SB5	A	2 2	PER MAN	22	1	F	A		.
61180	SB5	A	2 3		.	.				.
61280	SB5	A	2 3	EUT MIN	3	1	M	A		.
61380	SB5	A	2 3		.	.				.
61180	SB5	A	2 4		.	.				.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	PJ6	C	1 7	PER MAN	27	2	F	A		.
61180	PJ6	C	1 8		.	.				.
61280	PJ6	C	1 8		.	.				.
61380	PJ6	C	1 8		.	.				.
61180	PJ6	C	1 9	PER MAN	22	1	F	A	P	.
61280	PJ6	C	1 9		.	.				.
61380	PJ6	C	1 9		.	.				.
61180	PJ6	C	110	PER MAN	23	1	F	A		.
61280	PJ6	C	110	PER MAN	24	1	F	A		.
61380	PJ6	C	110		.	.				.
61180	PJ6	C	2 1		.	.				.
61280	PJ6	C	2 1	PER MAN	6	2	F	J		.
61380	PJ6	C	2 1	PER MAN	18	3	F	A		.
61180	PJ6	C	2 2		.	.				.
61280	PJ6	C	2 2		.	.				.
61380	PJ6	C	2 2		.	.				.
61180	PJ6	C	2 3		.	.				.
61280	PJ6	C	2 3		.	.				.
61360	PJ6	C	2 3	PER MAN	35	1	M	J		.
61180	PJ6	C	2 4	PER MAN	17	1	F	A		.
61280	PJ6	C	2 4		.	.				.
61380	PJ6	C	2 4		.	.				.
61180	PJ6	C	2 5		.	.				.
61280	PJ6	C	2 5		.	.				.
61360	PJ6	C	2 5		.	.				.
61180	PJ6	C	2 6		.	.				.
61280	PJ6	C	2 6	EUT MIN	2	1	F	A	P	.
61380	PJ6	C	2 6		.	.				.
61180	PJ6	C	2 7		.	.				.
61280	PJ6	C	2 7		.	.				.
61380	PJ6	C	2 7		.	.				.
61180	PJ6	C	2 8		.	.				.
61280	PJ6	C	2 8		.	.				.
61380	PJ6	C	2 8		.	.				.
61180	PJ6	C	2 9		.	.				.
61280	PJ6	C	2 9	PER MAN	26	1	M	A		.
61380	PJ6	C	2 9	EUT MIN	0	1	M	A		.
61180	PJ6	C	210		.	.				.
61280	PJ6	C	210		.	.				.
61360	PJ6	C	210	PER MAN	24	2	F	A		.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61280	PJ6	B	2 4	PER MAN	5	2	M	A	A	.
61380	PJ6	B	2 4	PER MAN	4	3	M	J		.
61180	PJ6	B	2 5	PER MAN	5	1	M	A	A	.
61280	PJ6	B	2 5	PER MAN	4	2	M	J		.
61380	PJ6	B	2 5		.	.				.
61180	PJ6	B	2 6	PER MAN	6	1	F	J		.
61280	PJ6	B	2 6	PER MAN	8	2	M	J		.
61380	PJ6	B	2 6	PER MAN	12	3	M	A		.
61180	PJ6	B	2 7		.	.				.
61280	PJ6	B	2 7		.	.				.
61380	PJ6	B	2 7		.	.				.
61180	PJ6	B	2 8	PER MAN	7	1	M	A	A	.
61280	PJ6	B	2 8	PER MAN	1	2	F	A	P	.
61380	PJ6	B	2 8		.	.				.
61180	PJ6	B	2 9		.	.				.
61280	PJ6	B	2 9		.	.				.
61380	PJ6	B	2 9	PER MAN	36	1	F	J		.
61180	PJ6	B	210		.	.				.
61280	PJ6	B	210		.	.				.
61380	PJ6	B	210		.	.				.
61180	PJ6	C	1 1	PER MAN	18	1	F	A		.
61280	PJ6	C	1 1		.	.				.
61380	PJ6	C	1 1		.	.				.
61180	PJ6	C	1 2		.	.				.
61280	PJ6	C	1 2		.	.				.
61380	PJ6	C	1 2	PER MAN	6	3	F	J		.
61280	PJ6	C	1 3		.	.				.
61180	PJ6	C	1 3		.	.				.
61380	PJ6	C	1 3	PER MAN	5	3	M	A	A	.
61180	PJ6	C	1 4		.	.				.
61280	PJ6	C	1 4	EUT MIN	1	1	M	A		.
61380	PJ6	C	1 4	PER MAN	28	2	M	J		.
61180	PJ6	C	1 5		.	.				.
61280	PJ6	C	1 5	PER MAN	17	2	F	A		.
61380	PJ6	C	1 5	PER MAN	17	3	F	J		.
61180	PJ6	C	1 6	PER MAN	21	1	F	A	P	.
61280	PJ6	C	1 6	PER MAN	25	1	M	A		.
61380	PJ6	C	1 6		.	.				.
61180	PJ6	C	1 7		.	.				.
61280	PJ6	C	1 7		.	.				.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61180	PJ6	B	1 1	PER MAN	3	1	M	J		.
61280	PJ6	B	1 1	PER MAN	18	2	F	A		.
61380	PJ6	B	1 1	PER MAN	3	2	M	J		.
61180	PJ6	B	1 2		.	.				.
61280	PJ6	B	1 2		.	.				.
61380	PJ6	B	1 2		.	.				.
61180	PJ6	B	1 3		.	.				.
61280	PJ6	B	1 3		.	.				.
61380	PJ6	B	1 3		.	.				.
61180	PJ6	B	1 4		.	.				.
61280	PJ6	B	1 4		.	.				.
61380	PJ6	B	1 4	PER MAN	31	2	M	J		.
61180	PJ6	B	1 5	PER MAN	2	1	M	J		.
61280	PJ6	B	1 5	PER MAN	28	1	M	J		.
61380	PJ6	B	1 5		.	.				.
61180	PJ6	B	1 6		.	.				.
61280	PJ6	B	1 6		.	.				.
61380	PJ6	B	1 6		.	.				.
61180	PJ6	B	1 7		.	.				.
61280	PJ6	B	1 7	PER MAN	21	2	F	A	P	.
61380	PJ6	B	1 7	PER MAN	21	3	F	A	P	.
61180	PJ6	B	1 8		.	.				.
61280	PJ6	B	1 8	PER MAN	7	2	M	A	A	.
61380	PJ6	B	1 8		.	.				.
61180	PJ6	B	1 9		.	.				.
61280	PJ6	B	1 9		.	.				.
61380	PJ6	B	1 9	PER MAN	1	3	F	A	P	.
61180	PJ6	B	110	PER MAN	1	1	F	A	P	.
61280	PJ6	B	110	PER MAN	27	1	F	A		.
61380	PJ6	B	110	PER MAN	7	3	M	A	A	.
61180	PJ6	B	2 1		.	.				.
61280	PJ6	B	2 1	PER MAN	2	2	M	J		.
61380	PJ6	B	2 1		.	.				.
61180	PJ6	B	2 2		.	.				.
61280	PJ6	B	2 2		.	.				.
61380	PJ6	B	2 2		.	.				.
61180	PJ6	B	2 3	PER MAN	4	1	M	J		.
61280	PJ6	B	2 3	PER MAN	31	1	M	J		.
61380	PJ6	B	2 3	PER MAN	2	3	M	J		.
61180	PJ6	B	2 4		.	.				.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	PJ6	A	1 7	PER MAN	13	3	M	J		.
61180	PJ6	A	1 8	PER MAN	8	1	M	J		.
61280	PJ6	A	1 8	PER MAN	11	2	M	J		.
61380	PJ6	A	1 8	PER MAN	11	3	M	J		.
61180	PJ6	A	1 9		.	.				.
61280	PJ6	A	1 9		.	.				.
61380	PJ6	A	1 9		.	.				.
61180	PJ6	A	110		.	.				.
61280	PJ6	A	110		.	.				.
61380	PJ6	A	110		.	.				.
61180	PJ6	A	2 1	PER MAN	15	1	F	A		.
61280	PJ6	A	2 1	PER MAN	33	1	M	A		.
61380	PJ6	A	2 1		.	.				.
61180	PJ6	A	2 2	PER MAN	14	1	M	J		.
61280	PJ6	A	2 2	PER MAN	14	2	M	J		.
61380	PJ6	A	2 2	PER MAN	14	3	M	J		.
61180	PJ6	A	2 3		.	.				.
61280	PJ6	A	2 3		.	.				.
61380	PJ6	A	2 3		.	.				.
61180	PJ6	A	2 4		.	.				.
61280	PJ6	A	2 4	PER MAN	34	1	M	A		.
61380	PJ6	A	2 4	PER MAN	38	1	M	A		.
61180	PJ6	A	2 5		.	.				.
61280	PJ6	A	2 5		.	.				.
61380	PJ6	A	2 5		.	.				.
61180	PJ6	A	2 6		.	.				.
61280	PJ6	A	2 6		.	.				.
61380	PJ6	A	2 6		.	.				.
61180	PJ6	A	2 7		.	.				.
61280	PJ6	A	2 7		.	.				.
61380	PJ6	A	2 7		.	.				.
61180	PJ6	A	2 8	PER MAN	16	1	F	A	P	.
61280	PJ6	A	2 8	PER MAN	16	2	F	A	P	.
61380	PJ6	A	2 8	PER MAN	16	3	F	A	P	.
61180	PJ6	A	2 9		.	.				.
61280	PJ6	A	2 9		.	.				.
61380	PJ6	A	2 9		.	.				.
61180	PJ6	A	210		.	.				.
61280	PJ6	A	210		.	.				.
61380	PJ6	A	210	PER MAN	8	3	M	J		.

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61280	PJ5	C	2 4		.	.				.
61380	PJ5	C	2 4	EUT MIN	6	1	M	A	A	.
61180	PJ5	C	2 5		.	.				.
61280	PJ5	C	2 5		.	.				.
61380	PJ5	C	2 5		.	.				.
61180	PJ5	C	2 6		.	.				.
61280	PJ5	C	2 6		.	.				.
61380	PJ5	C	2 6		.	.				.
61180	PJ5	C	2 7		.	.				.
61280	PJ5	C	2 7		.	.				.
61380	PJ5	C	2 7		.	.				.
61180	PJ5	C	2 8	EUT MIN	2	1	F	A	P	.
61280	PJ5	C	2 8		.	.				.
61380	PJ5	C	2 8		.	.				.
61180	PJ5	C	2 9		.	.				.
61280	PJ5	C	2 9		.	.				.
61380	PJ5	C	2 9		.	.				.
61180	PJ5	C	210		.	.				.
61280	PJ5	C	210		.	.				.
61380	PJ5	C	210		.	.				.
61180	PJ6	A	1 1		.	.				.
61280	PJ6	A	1 1		.	.				.
61380	PJ6	A	1 1	PER MAN	15	2	F	A		.
61180	PJ6	A	1 2	PER MAN	13	1	M	J		.
61280	PJ6	A	1 2		.	.				.
61380	PJ6	A	1 2	PER MAN	37	1	M	J		.
61180	PJ6	A	1 3	PER MAN	12	1	M	A		.
61280	PJ6	A	1 3	PER MAN	32	1	M	A		.
61380	PJ6	A	1 3		.	.				.
61180	PJ6	A	1 4		.	.				.
61280	PJ6	A	1 4		.	.				.
61380	PJ6	A	1 4		.	.				.
61180	PJ6	A	1 5		.	.				.
61280	PJ6	A	1 5	PER MAN	12	2	M	A		.
61380	PJ6	A	1 5		.	.				.
61180	PJ6	A	1 6		.	.				.
61280	PJ6	A	1 6		.	.				.
61380	PJ6	A	1 6	PER MAN	41	1	M	J		.
61180	PJ6	A	1 7	PER MAN	11	1	M	J		.
61280	PJ6	A	1 7	PER MAN	13	2	M	J		.

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61180	PJS	C	1 1	PER MAN	4	1	F	A		.
61280	PJS	C	1 1	PER MAN	4	2	F	A		.
61380	PJS	C	1 1	EUT MIN	6	3	F	A	P	79
61180	PJS	C	1 2	EUT MIN	3	1	F	A	P	.
61280	PJS	C	1 2	EUT MIN	5	1	M	A		.
61380	PJS	C	1 2		.	.				.
61180	PJS	C	1 3		.	.				.
61280	PJS	C	1 3		.	.				.
61380	PJS	C	1 3		.	.				.
61180	PJS	C	1 4		.	.				.
61280	PJS	C	1 4		.	.				.
61380	PJS	C	1 4	PER MAN	7	1	M	A		79
61180	PJS	C	1 5		.	.				.
61280	PJS	C	1 5		.	.				.
61380	PJS	C	1 5		.	.				.
61180	PJS	C	1 6	PER MAN	3	1	M	J		.
61280	PJS	C	1 6	PER MAN	12	1	M	J		.
61380	PJS	C	1 6	EUT MIN	0	1	F	A	P	.
61180	PJS	C	1 7		.	.				.
61280	PJS	C	1 7		.	.				.
61380	PJS	C	1 7		.	.				.
61180	PJS	C	1 8		.	.				.
61280	PJS	C	1 8		.	.				.
61380	PJS	C	1 8	PER MAN	12	2	M	J		.
61180	PJS	C	1 9	EUT MIN	6	1	F	A	P	79
61280	PJS	C	1 9	PER MAN	0	1	F	A	P	.
61380	PJS	C	1 9		.	.				.
61180	PJS	C	110		.	.				.
61280	PJS	C	110		.	.				.
61380	PJS	C	110	EUT MIN	2	3	F	A	P	.
61180	PJS	C	2 1		.	.				.
61280	PJS	C	2 1	EUT MIN	6	2	F	A	P	79
61380	PJS	C	2 1	PER MAN	4	3	F	A		.
61180	PJS	C	2 2		.	.				.
61280	PJS	C	2 2		.	.				.
61380	PJS	C	2 2		.	.				.
61180	PJS	C	2 3		.	.				.
61280	PJS	C	2 3		.	.				.
61380	PJS	C	2 3		.	.				.
61180	PJS	C	2 4		.	.				.

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DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61380	PJ5	B	1 7		.	.				.
61180	PJ5	B	1 8		.	.				.
61280	PJ5	B	1 8	CIT LAT	4	1	F	A	P	.
61380	PJ5	B	1 8		.	.				.
61180	PJ5	B	1 9		.	.				.
61280	PJ5	B	1 9	EUT MIN	2	2	F	A	P	.
61380	PJ5	B	1 9		.	.				.
61180	PJ5	B	110	PER MAN	8	1	M	A		79
61280	PJ5	B	110	PER MAN	11	1	F	J		.
61380	PJ5	B	110	PER MAN	11	2	F	J		.
61180	PJ5	B	2 1		.	.				.
61280	PJ5	B	2 1		.	.				.
61380	PJ5	B	2 1	PER MAN	8	2	M	A		.
61180	PJ5	B	2 2		.	.				.
61280	PJ5	B	2 2		.	.				.
61380	PJ5	B	2 2		.	.				.
61180	PJ5	B	2 3		.	.				.
61280	PJ5	B	2 3		.	.				.
61380	PJ5	B	2 3		.	.				.
61180	PJ5	B	2 4		.	.				.
61280	PJ5	B	2 4	PER MAN	8	1	M	A		.
61380	PJ5	B	2 4		.	.				.
61180	PJ5	B	2 5	EUT MIN	3	1	F	A	P	79
61280	PJ5	B	2 5		.	.				.
61380	PJ5	B	2 5		.	.				.
61180	PJ5	B	2 6		.	.				.
61280	PJ5	B	2 6		.	.				.
61380	PJ5	B	2 6		.	.				.
61180	PJ5	B	2 7		.	.				.
61280	PJ5	B	2 7		.	.				.
61380	PJ5	B	2 7		.	.				.
61180	PJ5	B	2 8		.	.				.
61280	PJ5	B	2 8		.	.				.
61380	PJ5	B	2 8		.	.				.
61180	PJ5	B	2 9		.	.				.
61280	PJ5	B	2 9	PER MAN	8	2	M	A		79
61380	PJ5	B	2 9	PER MAN	18	1	M	A		.
61180	PJ5	B	210		.	.				.
61280	PJ5	B	210		.	.				.
61380	PJ5	B	210		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61280	PJS	A	2 4	PER MAN	5	1	M	J		.
61380	PJS	A	2 4	PER MAN	14	1	M	J		.
61180	PJS	A	2 5		.	.				.
61280	PJS	A	2 5	CIT LAT	2	1	M	A	A	.
61380	PJS	A	2 5		.	.				.
61180	PJS	A	2 6		.	.				.
61280	PJS	A	2 6		.	.				.
61380	PJS	A	2 6		.	.				.
61180	PJS	A	2 7		.	.				.
61280	PJS	A	2 7		.	.				.
61380	PJS	A	2 7		.	.				.
61180	PJS	A	2 8		.	.				.
61280	PJS	A	2 8		.	.				.
61380	PJS	A	2 8		.	.				.
61180	PJS	A	2 9		.	.				.
61280	PJS	A	2 9	CIT LAT	3	1	M	A	A	.
61380	PJS	A	2 9	PER MAN	6	2	M	J		.
61180	PJS	A	210	PER MAN	2	1	F	A	P	.
61280	PJS	A	210	PER MAN	2	2	F	A	P	.
61380	PJS	A	210		.	.				.
61180	PJS	B	1 1		.	.				.
61280	PJS	B	1 1	PER MAN	3	2	M	J		.
61380	PJS	B	1 1		.	.				.
61180	PJS	B	1 2		.	.				.
61280	PJS	B	1 2		.	.				.
61380	PJS	B	1 2		.	.				.
61180	PJS	B	1 3		.	.				.
61280	PJS	B	1 3		.	.				.
61380	PJS	B	1 3		.	.				.
61180	PJS	B	1 4		.	.				.
61280	PJS	B	1 4		.	.				.
61380	PJS	B	1 4	PER MAN	0	1	M	J		.
61180	PJS	B	1 5		.	.				.
61280	PJS	B	1 5		.	.				.
61380	PJS	B	1 5		.	.				.
61180	PJS	B	1 6		.	.				.
61280	PJS	B	1 6		.	.				.
61380	PJS	B	1 6	PER MAN	3	3	M	J		.
61180	PJS	B	1 7		.	.				.
61280	PJS	B	1 7		.	.				.

RIO BLANCO OIL SHALE COMPANY
SMALL MAMMAL SURVEY - SUMMER 1980

DATE	VEG	TRAN-SECT	TRAP NUM	SPECIES CODE	I.D. NUM	CAP TURED	SEX	AGE	REPRO STATUS	RECAP-TURED
61180	PJS	A	1 1	CIT LAT	1	1	F	A	P	.
61280	PJS	A	1 1	PER MAN	7	1	M	A	A	.
61380	PJS	A	1 1	PER MAN	1	3	F	A	P	.
61180	PJS	A	1 2		.	.				.
61280	PJS	A	1 2		.	.				.
61380	PJS	A	1 2		.	.				.
61180	PJS	A	1 3		.	.				.
61280	PJS	A	1 3		.	.				.
61380	PJS	A	1 3		.	.				.
61180	PJS	A	1 4		.	.				.
61280	PJS	A	1 4		.	.				.
61380	PJS	A	1 4	PER MAN	8	3	M	A		79
61180	PJS	A	1 5		.	.				.
61280	PJS	A	1 5		.	.				.
61380	PJS	A	1 5		.	.				.
61180	PJS	A	1 6		.	.				.
61280	PJS	A	1 6		.	.				.
61380	PJS	A	1 6		.	.				.
61180	PJS	A	1 7		.	.				.
61280	PJS	A	1 7		.	.				.
61380	PJS	A	1 7	PER MAN	15	1	F	.A		.
61180	PJS	A	1 8		.	.				.
61280	PJS	A	1 8	PER MAN	6	1	M	J		.
61380	PJS	A	1 8	PER MAN	16	1	M	J		.
61180	PJS	A	1 9		.	.				.
61280	PJS	A	1 9	EUT MIN	4	1	F	A		.
61380	PJS	A	1 9	PER MAN	17	1	F	J		.
61180	PJS	A	110		.	.				.
61280	PJS	A	110		.	.				.
61380	PJS	A	110		.	.				.
61180	PJS	A	2 1	EUT MIN	1	1	M	A		.
61280	PJS	A	2 1	PER MAN	1	2	F	A	P	.
61380	PJS	A	2 1	PER MAN	13	1	M	A		.
61180	PJS	A	2 2	PER MAN	1	1	F	A		.
61280	PJS	A	2 2		.	.				.
61380	PJS	A	2 2		.	.				.
61180	PJS	A	2 3		.	.				.
61280	PJS	A	2 3		.	.				.
61380	PJS	A	2 3		.	.				.
61180	PJS	A	2 4		.	.				.

Small Mammals Species List

RBOSC - 1980

Code	Scientific Name	Common Name
CITLAT	*Citellus lateralis*	Golden-mantled Squirrel
EUTMIN	*Eutamias minimus*	Least Chipmunk
PERMAN	*Peromyscus maniculatus*	Deer Mouse
REIMEG	*Reithrodontomys megalotis*	Western Harvest Mouse

APPENDIX 3-2.1

Small Mammal Trapping Results for 1980 by Date, Habitat, Area, Transect and Trap Number

APPENDIX 3-2

Fauna Data

APPENDIX 4-O

Aquatic Data

APPENDIX 4-2

Species Composition of Periphyton at each Sampling Station over all Sampling Periods for 1980

PERIPHYTON SPECIES LIST
BOOSC AQUATIC STUDIES
1980

TAXON	STATION NUMBER					
	13	14	20	21	27	29
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	x	x	x	x	x	x
ACHNANTHES EXIGUA		x				
ACHNANTHES HAUCKIANA			x			
ACHNANTHES HAUCKIANA VAR. ROSTRATA			x			
ACHNANTHES LANCEOLATA	x	x	x	x	x	x
ACHNANTHES LANCEOLATA VAR. DUBIA	x	x	x	x	x	x
ACHNANTHES LINEARIS				x	x	
ACHNANTHES MICROCEPHALA		x			x	x
ACHNANTHES MINUTISSIMA	x	x	x	x	x	x
ACHNANTHES SP.	x		x	x		
AMPHIPLEURA PELLUCIDA					x	
AMPHORA COFFEIFORMIS			x	x		x
AMPHORA OVALIS	x	x	x	x	x	x
AMPHORA OVALIS VAR. AFFINIS	x	x				
AMPHORA PERPUSILLA			x	x	x	x
AMPHORA VENETA	x		x	x	x	
ASTERIONELLA FORMOSA			x			
CALONEIS AMPHISBAENA	x	x	x		x	
CALONEIS VENTRICOSA	x	x			x	x
COCCONEIS PEDICULUS	x	x		x	x	x
COCCONEIS PLACENTULA	x	x	x	x	x	x
CYCLOTELLA RODANICA						x
CYCLOTELLA MENEGHINIANA	x	x	x	x	x	x
CYMATOPLEURA SOLEA		x			x	
CYMBELLA AFFINIS	x	x	x	x	x	x
CYMBELLA CISTULA	x	x	x	x		
CYMBELLA CYMBIFORMIS	x	x	x			
CYMBELLA CYMBIFORMIS VAR. NONPUNCTATA		x				
CYMBELLA PERUVIANA			x			x
CYMBELLA PINNATA	x	x	x	x	x	x
CYMBELLA PINNATA VAR. SILESIACA	x	x	x	x	x	x
CYMBELLA SINUATA	x	x		x	x	x
CYMBELLA SINUATA VAR. ANTIQUE					x	
CYMBELLA SP.			x	x		
DENTICULA ELEGANS	x	x			x	x
DIATOMA HIEMALE	x		x	x		
DIATOMA HIEMALE VAR. MESODON					x	x
DIATOMA TENUE						x
DIATOMA TENUE VAR. ELONGATUM	x	x	x	x	x	x
DIATOMA VULGARE	x	x	x	x	x	x
DIATOMA SP.	x		x			
ENTOMONEIS ORNATA					x	
ENTOMONEIS PALUDOSA		x	x	x		x
EPITHEMIA SOREX	x	x	x	x	x	x
EPITHEMIA TURGIDA					x	x
EUNOTIA PECTINALIS	x				x	
FRAGILARIA CAPUCINA	x	x	x	x	x	x
FRAGILARIA CONSTRUENS				x	x	
FRAGILARIA CROTONENSIS	x	x	x			x
FRAGILARIA LEPTOSTAURON					x	x
FRAGILARIA PINNATA				x	x	x
FRAGILARIA VAUCHERIAE	x	x	x	x	x	x

FRUSTULIA RHOMBOIDES					x	x
GOMPHONEIS BRACHELANA					x	x
GOMPHONEMA ACUMINATUM	x		x	x	x	x
GOMPHONEMA ANGUSTATUM	x	x	x	x	x	x
GOMPHONEMA DICHOTOMUM						x
GOMPHONEMA GRACILE		x	x	x		
GOMPHONEMA INTRICATUM		x	x	x	x	x
GOMPHONEMA INTRICATUM VAR. DUBIA					x	x
GOMPHONEMA OLIVACEUM	x		x	x	x	x
GOMPHONEMA PARVULUM	x	x	x	x	x	x
GOMPHONEMA SUBCLAVATUM		x				
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM		x				x
GOMPHONEMA TRUNCATUM					x	
GOMPHONEMA SP.				x		
GYROSIGMA SPENCERII	x	x	x	x	x	x
HANNAEA ARCUS					x	x
HANTZSCHIA AMPHIOXYS	x	x	x	x		x
MASTOGLOIA ELLIPTICA			x	x		
MASTOGLOIA BREVILIFI				x		
MELOSIRA SP.			x	x		
MELOSIRA VARIANS	x	x			x	
MERIDION CIRCULARE	x	x	x		x	x
NAVICULA ARVENSIS	x	x	x	x		
NAVICULA AURICULATA	x					x
NAVICULA CAPITATA			x			
NAVICULA CINCTA		x		x	x	x
NAVICULA CINCTA VAR. ROSTRATA			x	x		
NAVICULA CRYPTOCEPHALA	x	x	x	x	x	x
NAVICULA CRYPTOCEPHALA VAR. VENETA	x	x	x	x	x	x
NAVICULA CUSPIDATA	x	x	x	x	x	
NAVICULA ELGINENSIS	x	x				x
NAVICULA ERIGUA		x	x		x	
NAVICULA GRACILOIDES					x	x
NAVICULA HALOPHILA	x	x	x	x		
NAVICULA MEUGLERI	x	x	x	x	x	x
NAVICULA LANCEOLATA					x	x
NAVICULA LUZONENSIS		x			x	x
NAVICULA MINIMA	x	x	x	x	x	x
NAVICULA MINUSCULA						x
NAVICULA PUTICA		x	x	x		
NAVICULA NOTHA	x	x	x	x	x	x
NAVICULA PELLICULOSA	x	x	x	x	x	x
NAVICULA PUPULA	x				x	x
NAVICULA PYGMAEA	x	x	x	x	x	x
NAVICULA RADIOSA			x	x	x	x
NAVICULA RADIOSA VAR. PARVA					x	x
NAVICULA RHYNCHOCEPHALA		x	x		x	x
NAVICULA SALINARUM			x	x		
NAVICULA SALINARUM VAR. INTERMEDIA					x	x
NAVICULA SECRETA				x		
NAVICULA SECRETA VAR. APICULATA	x	x	x	x	x	x
NAVICULA SIMPLEX		x	x			
NAVICULA SUBHAMULATA					x	
NAVICULA TRIPUNCTATA	x		x	x	x	x
NAVICULA VIRIDULA	x	x	x	x	x	x
NAVICULA VIRIDULA VAR. AVENACEA	x	x	x	x	x	x
NAVICULA VIRIDULA VAR. LINEARIS					x	x
NAVICULA SP.			x	x	x	x
NEIDIUM SP.					x	
NITZSCHIA ACICULARIS	x	x	x	x	x	x
NITZSCHIA APICULATA	x		x	x	x	x
NITZSCHIA BELLNHEIMIANA	x				x	
NITZSCHIA COMMUNIS		x	x	x		
NITZSCHIA DENTICULA	x	x	x	x	x	

NITZSCHIA DISSIPATA	x	x	x	x	x	x
NITZSCHIA EPITHEMOIDES	x			x		
NITZSCHIA FASCICULATA	x					
NITZSCHIA FONTICOLA	x	x	x	x	x	x
NITZSCHIA FRUSTULUM	x	x	x	x	x	x
NITZSCHIA GRACILIS			x	x		
NITZSCHIA HOLSATICA	x	x	x	x	x	x
NITZSCHIA HUNGARICA		x	x	x	x	x
NITZSCHIA IGNORATA					x	
NITZSCHIA LATENS	x	x	x	x	x	
NITZSCHIA LINEARIS	x	x	x	x	x	x
NITZSCHIA MICROCEPHALA		x	x	x		x
NITZSCHIA PALEA	x	x	x	x	x	x
NITZSCHIA ROMANA			x	x		
NITZSCHIA SIGMOIDEA			x	x	x	
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			x	x	x	x
NITZSCHIA SP.	x		x	x	x	x
PINNULARIA BICEPS		x				
PINNULARIA BOREALIS	x		x	x		x
PINNULARIA BRERISSONII	x	x	x	x	x	
PINNULARIA INTERMEDIA				x		
PINNULARIA MAJOR		x		x	x	x
PINULARIA MESOLEPTA		x				
PINNULARIA SP.	x	x	x		x	
PLEUROSIGMA DELICATISSIMA			x	x	x	x
RHOICOSPHENIA CURVATA	x	x	x	x	x	x
RHOPALODIA GIBBA	x	x	x	x	x	x
RHOPALODIA GIBBERULA		x			x	
RHOPALODIA MUSCULUS	x	x	x	x	x	x
STAURONEIS ANCEPS VAR. LINEARIS				x		
STEPHANODISCUS HANTZSCHII					x	x
SURIRELLA ANGUSTATA		x				
SURIRELLA LINEARIS		x	x	x		
SURIRELLA OVALIS	x	x	x	x	x	x
SURIRELLA OVATA	x	x	x	x	x	x
SURIRELLA SPIRALIS		x	x	x		
SYNEDRA ACUS	x	x	x	x		x
SYNEDRA AMPHICEPHALA			x			
SYNEDRA DELICATISSIMA					x	
SYNEDRA FASCICULATA	x	x	x	x	x	
SYNEDRA MINUSCULA	x	x	x	x	x	x
SYNEDRA PULCHELLA VAR. LANCEOLATA		x	x	x		x
SYNEDRA ULNA	x	x	x	x	x	x
SYNEDRA ULNA VAR. CONSTRICTA					x	x
SYNEDRA ULNA VAR. LANCEOLATA				x		
SYNEDRA ULNA VAR. OXYRHYNCHUS		x				
SYNEDRA SP.	x	x	x	x		
THALASSIOSIRA FLUVIATILIS	x	x	x	x		
UNIDENTIFIED PENNATE DIATOMS	x	x	x		x	x

CHLOROPHYTA

ANKISTRODESMUS SP.				x		
BULBOCHAETA SP.		x	x	x		x
CHARA SP.	x					
CHAPACIUM SP.		x				x
CLADOPHORA GLOMERATA	x	x			x	x
CLADOPHORA SP.	x	x	x	x	x	x
CLOSTERIUM SP.		x		x		
DRAPARNALDIA SP.	x					
ENTEROMORPHA SP.				x		
UNIDENTIFIED GREEN COCCOID	x	x	x	x		x
GLOEOCYSTIS SP.			x			
GLOEOCYSTIS VESICULOSA			x			
MICROSPORA SP.	x	x		x	x	x
MOUGEOTIA SP.			x	x		
OEDOGONIUM SP.	x					
PALMELLA STAGE OF CHAETOPHORACEAE	x				x	

x = TAXON OBSERVED AT SAMPLING STATION

APPENDIX 4-2.1

Seasonal Changes in Periphyton Species Composition
at each Sampling Station in 1980

PERIPHYTON SPECIES LIST
PROSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 13
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES AFFINIS				X		
ACHNANTHES EXIGUA	X	X				
ACHNATHES HAUCKIANA					X	X
ACHNATHES HAUCKIANA VAR. ROSTRATA		X	X	X	X	X
ASTERIONELLA FORMOSA		X	X	X	X	X
CALONEIS SPITHII			X			
CALONEIS VENTRICOSA			X			
COCCONEIS PEDICULUS	X	X	X	X	X	X
COCCONEIS PLACENTULA			X	X	X	X
CYCLOTELLA STELLIGERA	X	X	X			
CYLINDROTHECA GRACILIS				X	X	
CYMBELLA AFFINIS					X	
CYMBELLA CISTULA	X			X	X	X
CYMBELLA MEXICANA					X	X
CYMBELLA MINUTA						X
CYMBELLA MINUTA VAR. SILESIACA				X		
CYMBELLA SINUATA	X			X		
DENTICULA ELEGANS	X	X			X	
DIATOMA HIEMALE VAR. MESODON	X	X	X	X	X	X
DIATOMA VULGARE VAR. GRANDE					X	
DIATOMA SP.		X			X	
ENTOMONEIS ORNATA	X					X
EPITHEMIA SOREX	X					
EPITHEMIA TURGIDA	X	X	X	X	X	X
EUNOTIA PECTINALIS	X	X	X	X	X	X
FRAGILARIA CROTONENSIS						X
FRAGILARIA VAUCHERIAE	X					
GOMPHONEMA ACUMINATUM	X					
GOMPHONEMA ANGUSTATUM		X				
GOMPHONEMA GRACILE	X					
GOMPHONEMA INTRICATUM VAR. DENTELLA	X	X	X	X	X	X
GOMPHONEMA OLIVACEUM	X			X	X	X
GOMPHONEMA SUBCLAVATUM	X	X				
GOMPHONEMA SUBCLAVATUM VAR. MESAETENSIS					X	X
CYROSIGMA SPENCERII	X	X	X	X	X	X
MASTOGLOIA ELLIPTICA	X					
MASTOGLOIA GREVILLEI	X	X			X	
MELOSIRA VARIANS				X	X	X
MERIDION CIRCULARE	X				X	
NAVICULA ARVICOLATA	X	X				
NAVICULA CAPITATA	X	X	X	X	X	
NAVICULA EXIGUA	X			X	X	X
NAVICULA GRACILOIDES	X			X		

NAVICULA HALOPHILA					x	
NAVICULA LANCEOLATA	x					
NAVICULA MENISCULUS VAR. UPSALIENSIS	x					
NAVICULA MINIMA	x					
NAVICULA MUTICA						x
NAVICULA NOTHA			x	x	x	
NAVICULA PELLICULOSA	x		x		x	
NAVICULA PUPULA	x		x	x	x	x
NAVICULA PYGMAEA	x		x	x		x
NAVICULA RADIOSA VAR. PARVA			x			
NAVICULA SALINARUM VAR. INTERMEDIA		x	x	x	x	x
NAVICULA SECRETA	x	x	x		x	x
NAVICULA SERIANULATA	x		x			
NAVICULA TRIPUNCTATA VAR. SCHIZONEMOIDES				x		x
NAVICULA VIRIDULA VAR. AVENACEA					x	
NAVICULA VIRIDULA VAR. LINEARIS	x	x				
NEIDIUM SP.	x		x			
NITZSCHIA ACICULARIS	x					
NITZSCHIA BUENHEIMIANA	x					
NITZSCHIA COMMUNIS			x	x	x	
NITZSCHIA ELLIPTICA	x	x	x	x		x
NITZSCHIA FASCICULATA			x			
NITZSCHIA FRUSTULUM	x		x			
NITZSCHIA HOLSATICA	x	x	x	x		
NITZSCHIA HUNGARICA			x	x	x	x
NITZSCHIA LATENS		x				
NITZSCHIA MICROCEPHALA	x	x	x			
NITZSCHIA PALEA	x			x	x	x
NITZSCHIA SIGMOIDEA			x			
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			x	x	x	
NITZSCHIA SP.	x					
PINNULARIA INTERMEDIA	x	x	x			
PINNULARIA MAIOR	x	x	x	x	x	x
PINNULARIA MESOLEPTA		x				
PINNULARIA SP.	x	x				x
PLEUROSIGMA DELICATISSIMA	x	x	x	x		x
RHOPALODIA GIBBA		x	x			
RHOPALODIA GIBBERULA	x	x	x		x	
RHOPALODIA MUSCULUS		x			x	
STAURONEIS ANCEPS VAR. LINEARIS	x	x	x		x	x
STAURONEIS SMITHII					x	x
STEPHANODISCUS HANTZSCHII						x
SURIRELLA ANGUSTATA	x		x	x	x	
SURIRELLA LINEARIS	x				x	x
SURIRELLA OVATA				x		x
SURIRELLA SPIRALIS	x	x			x	
SYNEDRA FASCICULATA	x					
SYNEDRA PERVISCULA		x				
SYNEDRA PULCHELLA VAR. LANCEOLATA				x		
SYNEDRA ULNA						x
SYNEDRA ULNA VAR. LANCEOLATA					x	

CHLOROPHYTA

ANKISTRODESMUS SP.		X	X	X	X	X
BULBOCHAETA SP.	X	X	X	X	X	X
CHARA SP.						X
CHAPACIUM SP.						X
CHLAMYDOMONAS SP.	X					
CLADOPHORA SP.					X	
CLOSTERIUM SP.	X	X	X		X	X
DRAPARNALDIA SP.		X	X	X	X	X
ENTEROMORPHA SP.	X					
MICROSPORA SP.	X					X
MOUGEOTIA SP.					X	
OEDOGONIUM SP.		X				X

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
PBGSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 14
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES AFFINIS		X	X	X	X	X
ACHNATHES HAUCKIANA	X	X	X	X	X	X
ACHNATHES HAUCKIANA VAR. POSTRATA					X	X
ACHNANTHES LANCEOLATA					X	X
ASTERIONELLA FORMOSA		X	X	X	X	X
COCCONEIS PEDICULUS	X	X	X	X	X	X
COCCONEIS PLACENTULA			X	X	X	X
CYCLOTELLA BODANICA				X		
CYCLOTELLA STELLIGERA	X	X	X			
CYLINDROTHECA GRACILIS				X		
CYMBELLA AFFINIS					X	X
CYMBELLA CISTULA	X			X	X	
CYMBELLA MEXICANA				X	X	
CYMBELLA MINUTA					X	
CYMBELLA TUMIDA	X	X				
DENTICULA ELEGANS	X		X	X		
DIATOMA HIEMALE VAR. MESODON	X	X	X	X	X	X
DIATOMA VULGARE VAR. GRANDE				X	X	
DIATOMA SP.					X	X
EPITHEMIA TURGIDA	X	X	X	X	X	X
EUNOTIA PECTINALIS			X		X	X
FRAGILARIA CAPUCINA		X				
FRAGILARIA CROTONENSIS						X
FRAGILARIA VAUCHERIAE	X					
GOMPHONEMA ACUMINATUM	X					
GOMPHONEMA ANGUSTATUM				X	X	X
GOMPHONEMA INTRICATUM VAR. PUMILA	X	X	X	X		X
GOMPHONEMA OLIVACEUM	X	X	X	X	X	X
GOMPHONEMA SUBCLAVATUM	X					
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM	X			X	X	
GOMPHONEMA SP.	X	X			X	
GYROSIGMA SPENCERII	X	X	X	X		X
MASTOGLOIA ELLIPTICA	X				X	
MASTOGLOIA PARVULA	X	X	X	X	X	
MELOSIRA VARIANS	X			X	X	X
PERIDICA CIRCULARE			X		X	
NAVICULA AMPHICEPHALA	X				X	
NAVICULA CAPITATA	X	X		X	X	X
NAVICULA ECTASENSIS	X					
NAVICULA EXIGUA	X	X	X	X	X	X
NAVICULA GRACILOIDES						X

NAVICULA HALOPHILA				x		x
NAVICULA HEUFLERI				x		
NAVICULA LANCEOLATA	x					
NAVICULA MINIMA	x					
NAVICULA MUTICA VAR. UNDULATA		x				x
NAVICULA NOTHA			x	x	x	
NAVICULA PELLICULOSA	x		x		x	
NAVICULA PUPULA	x	x	x	x	x	x
NAVICULA PYGMAEA			x	x		x
NAVICULA SALINARUM VAR. INTERMEDIA			x	x	x	x
NAVICULA SECRETA	x	x		x		x
NAVICULA SUBHAMULATA			x		x	
NAVICULA TRIPUNCTATA VAR. SCHIZONEMOIDES	x					
NAVICULA VIRIDULA VAR. AVENACEA					x	
NAVICULA VIRIDULA VAR. LINEARIS	x	x				
NEIDIUM SP.		x				x
NITZSCHIA ACICULARIS				x		
NITZSCHIA COMMUNIS				x	x	x
NITZSCHIA DISSIPATA	x					
NITZSCHIA ELLIPTICA	x	x	x	x	x	x
NITZSCHIA FRUSTULUM	x		x			
NITZSCHIA PALEA	x	x	x			
NITZSCHIA PUNGARICA				x	x	x
NITZSCHIA LATENS		x				
NITZSCHIA MICROCEPHALA		x	x			
NITZSCHIA PALEA	x	x		x	x	x
NITZSCHIA SIGMOIDEA			x			
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			x			
NITZSCHIA SP.	x	x	x			
PINNULARIA BOREALIS	x					
PINNULARIA INTERMEDIA	x	x	x			
PINNULARIA MAJOR	x		x	x	x	x
PINULARIA MESOLEPTA		x				
PINNULARIA SP.	x	x	x			x
PLEUROSIGMA DELICATISSIMA	x	x	x	x		x
RHOPALODIA GIBBA	x		x			
RHOPALODIA GIBBERULA	x	x	x		x	x
RHOPALODIA MUSCULUS			x		x	x
STAURONEIS ANCEPS VAR. LINEARIS	x	x	x			x
STAURONEIS SMITHII			x	x		
STEPHANODISCUS HANTZSCHII						x
SURIRELLA ANGUSTATA		x	x	x		x
SURIRELLA LINEARIS	x	x	x		x	
SURIRELLA OVATA	x	x				
SURIRELLA SPIRALIS	x	x	x		x	
SYNEDRA ACUS	x					
SYNEDRA AMPHICEPHALA		x				
SYNEDRA MINUSCULA		x				
SYNEDRA PULCHELLA VAR. LANCEOLATA				x		x
SYNEDRA ULNA		x				
SYNEDRA ULNA VAR. LANCEOLATA					x	
SYNEDRA ULNA VAR. OXYRHYNCHUS		x				

CHLOROPHYTA

ANKISTRODESMUS SP.	X	X	X	X	X	X
BULBOCHAETA SP.	X	X	X	X	X	X
CHARA SP.					X	X
CHARACIUM SP.						X
CLADOPHORA SP.					X	X
CLOSTERIUM SP.	X	X				X
DRAPARNALDIA SP.		X	X	X	X	X
ENTEROMORPHA SP.	X	X				
GLOEOCYSTIS SP.						X
MICROSPORA SP.	X					
MOUGEOTIA SP.					X	
PEDIASTRUM DUPLEX				X		

X = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
PROSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 2C
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	X		X	X		
ACHNANTHES EXIGUA	X	X	X	X	X	X
ACHNANTHES HAUCKIANA	X	X	X	X	X	X
ACHNANTHES LANCEOLATA					X	X
ASTERIONELLA FORMOSA	X	X			X	
COCCONEIS PEDICULUS	X	X		X		
COCCONEIS PLACENTULA					X	
CYCLOTELLA BODANICA	X					
CYCLOTELLA MENEGHINIANA	X	X				
CYCLOTELLA STELLIGERA	X	X		X	X	X
CYMATOPLEURA SOLEA				X		X
CYMBELLA CISTULA	X	X			X	
CYMBELLA MEXICANA	X	X		X	X	X
CYMBELLA MINUTA					X	
CYMBELLA SINUATA	X				X	X
CYMBELLA SP.		X				
CYMBELLA TUMIDA	X	X		X	X	X
DENTICULA ELEGANS	X	X		X	X	X
DIATOMA HIEMALE VAR. MESODON		X		X	X	X
DIATOMA VULGARE				X	X	X
DIATOMA VULGARE VAR. GRANDE	X	X				
EPITHEMIA TURGIDA	X	X		X	X	X
EUNOTIA PECTINALIS		X		X	X	X
FRAGILARIA CAPUCINA	X	X		X	X	
FRAGILARIA CONSTRUENS	X					
FRAGILARIA PINNATA		X			X	
FRUSTULIA RHOMBOIDES				X		
GOMPHONEMA ACUMINATUM				X		
GOMPHONEMA ANGUSTATUM	X	X		X	X	X
GOMPHONEMA INTRICATUM				X		
GOMPHONEMA OLIVACEUM	X	X		X	X	X
GOMPHONEMA PARVULUM	X	X			X	
GOMPHONEMA SIMUS	X				X	
GOMPHONEMA SUBCLAVATUM	X					
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM	X					
GOMPHONEMA TRUNCATUM	X					X
GOMPHONEMA SP.		X				X

GYROSIGMA SPENCERII	x	x	x	x	x
HANNAEA ARCUS		x			
HANTZSCHIA AMPHIOXYS		x			
MASTOGLOIA ELLIPTICA				x	x
MASTOGLOIA GREVILLEI		x	x		
MERIDION CIRCULARE		x			
NAVICULA ARVENSIS			x		x
NAVICULA AURICULATA	x	x	x	x	x
NAVICULA CAPITATA	x	x		x	x
NAVICULA CUSPIDATA				x	x
NAVICULA EXIGUA		x		x	x
NAVICULA EXIGUA VAR. CAPITATE		x	x		
NAVICULA LUZONENSIS			x	x	
NAVICULA MENISCULUS VAR. UPSALIENSIS		x			
NAVICULA MUTICA VAR. UNDULATA					x
NAVICULA PELLICULOSA	x	x	x	x	
NAVICULA PUPULA			x	x	x
NAVICULA PYGMAEA			x		
NAVICULA RADIOSA VAR. PARVA		x			
NAVICULA SALINARUM					x
NAVICULA SECRETA	x		x	x	x
NAVICULA SECRETA VAR. APICULATA			x	x	x
NAVICULA SEMINULUM			x	x	x
NAVICULA SERRAMULATA	x		x	x	x
NAVICULA VIRIDULA VAR. AVENACEA		x	x	x	
NAVICULA VIRIDULA VAR. LINEARIS	x	x		x	
NAVICULA SP.					x
NEIDIUM SP.		x			x
NITZSCHIA ACICULARIS	x				x
NITZSCHIA APICULATA			x	x	
NITZSCHIA BLENHEIMIANA	x		x	x	x
NITZSCHIA DENTICULA	x	x			
NITZSCHIA ELLIPTICA	x	x	x	x	x
NITZSCHIA FONTICOLA				x	
NITZSCHIA FRUSTULUM	x	x	x	x	x
NITZSCHIA HOLSATICA	x	x	x	x	
NITZSCHIA HUNGARICA			x	x	x
NITZSCHIA TENUATA	x				
NITZSCHIA LATENS		x			
NITZSCHIA LINEARIS					x
NITZSCHIA MICROCEPHALA		x			x
NITZSCHIA PALEA		x		x	
NITZSCHIA ROMANA					x
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			x		
NITZSCHIA SP.	x	x	x	x	x
PINNULARIA INTERMEDIA	x	x			
PINNULARIA MAJOR	x	x	x	x	x
PINNULARIA SP.		x	x		x

PLEUROSIGMA DELICATISSIMA			x		x
RHOICOSPHENIA CURVATA					x
RHOPALODIA GIBBA				x	
RHOPALODIA GIBBERULA	x	x	x	x	x
STAURONEIS ANCEPS VAR. LINEARIS	x	x	x	x	x
STEPHANODISCUS HANTZSCHII			x	x	x
SURIRELLA ANGUSTATA				x	
SURIRELLA LINEARIS	x			x	x
SURIRELLA SPIRALIS		x			
SYNEDRA AMPHICEPHALA		x			
SYNEDRA FASCICULATA		x		x	x
SYNEDRA MINUSCULA		x			x
SYNEDRA PULCHELLA VAR. LANCEOLATA	x	x	x	x	x
SYNEDRA ULNA		x	x	x	x
SYNEDRA ULNA VAR. CONSTRICTA		x			
SYNEDRA ULNA VAR. LANCEOLATA			x		
THALASSIOSIRA FLUVIATILIS		x			
CHLOROPHYTA					
ANKISTRODESMUS SP.		x	x	x	
BULBOCHAETA SP.	x	x	x	x	
CLADOPHORA GLOMERATA					x
CLADOPHORA SP.			x		
CLOSTERIUM SP.		x			x
ENTEROMORPHA SP.		x	x	x	x
UNIDENTIFIED GREEN COCCOID			x	x	x
OEDOGONIUM SP.		x	x		x

x = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
PROSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 21
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	X					
ACHNANTHES EXIGUA				X	X	
ACHNATHES HAUCKIANA			X	X	X	X
ACHNANTHES HAUCKIANA VAR. POSTRATA		X	X	X	X	X
ACHNANTHES LANCEOLATA	X					
ASTERIONELLA FORMOSA	X	X				
COCCONEIS PEDICULUS	X	X				
COCCONEIS PLACENTULA						X
CYCLOTELLA MENEGHINIANA	X					
CYCLOTELLA STELLIGERA	X	X		X	X	X
CYMBELLA AFFINIS						X
CYMBELLA CISTULA	X	X				
CYMBELLA MEXICANA	X	X		X	X	
CYMBELLA SP.					X	
CYMBELLA TURGIDA	X			X	X	X
DENTICULA ELEGANS	X	X		X	X	X
DIATOMA HIEMALE	X	X				
DIATOMA HIEMALE VAR. MESODON		X		X	X	X
DIATOMA VULGARE VAR. GRANDE	X	X				
EPITHEMIA SOREX						X
EPITHEMIA TURGIDA	X	X		X	X	X
EUNOTIA PECTINALIS				X	X	X
FRAGILARIA CAPUCINA	X	X		X		X
FRAGILARIA PINNATA	X	X		X		
FRUSTULIA RHOMBOIDES		X				
GOMPHONEIS HERCULEANA				X		
GOMPHONEMA ACUMINATUM					X	
GOMPHONEMA ANGUSTATUM	X	X		X	X	X
GOMPHONEMA INTRICATUM VAR. PUMILA		X				X
GOMPHONEMA OLIVACEUM	X	X		X	X	X
GOMPHONEMA PARVULUM	X			X		
GOMPHONEMA SUBCLAVATUM	X					
GOMPHONEMA SUBCLAVATUM VAR. DESALTERSIS	X					X
GOMPHONEMA TRUNCATUM	X	X				
GOMPHONEMA SP.	X					
GYROSIGMA SPENCERII	X	X		X	X	X
HANNAEA ARCUS					X	
HANTZSCHIA AMPHIOXYS	X					
MASTOGLOIA ELLIPTICA						X

MASTOGLOIA GREVILLEI		x	x		x
MELOSIRA SP.	x	x			
MERIDION CIRCULARE	x	x	x		
NAVICULA ARVENSIS					x
NAVICULA AURICULATA	x	x	x	x	x
NAVICULA CAPITATA	x		x	x	x
NAVICULA CRYPTOCEPHALA					x
NAVICULA EXIGUA				x	x
NAVICULA EXIGUA VAR. CAPITATE	x	x			x
NAVICULA GRACILOIDES					x
NAVICULA MENISCULUS VAR. UPSALIENSIS		x		x	
NAVICULA MINUSCULA	x				
NAVICULA MUTICA VAR. UNDULATA	x			x	
NAVICULA PELLICULOSA	x	x	x	x	x
NAVICULA PUPULA			x	x	x
NAVICULA RADIOSA					x
NAVICULA SALINARUM			x		x
NAVICULA SECRETA	x	x	x		x
NAVICULA SECRETA VAR. APICULATA			x	x	x
NAVICULA SEMINULUM			x		
NAVICULA SUBHAMULATA	x		x		
NAVICULA TRIPUNCTATA					x
NAVICULA VIRIDULA VAR. AVENACEA		x	x	x	x
NAVICULA VIRIDULA VAR. LINEARIS	x	x			
NAVICULA SP.					x
NEIDIUM SP.		x		x	
NITZSCHIA ACICULARIS	x	x			
NITZSCHIA APICULATA			x		
NITZSCHIA BULNHEIMIANA	x		x	x	x
NITZSCHIA DENTICULA	x				x
NITZSCHIA ELLIPTICA		x	x	x	x
NITZSCHIA FRUSTULUM	x	x	x	x	x
NITZSCHIA HOLSATICA	x	x	x	x	x
NITZSCHIA HUNGARICA			x	x	x
NITZSCHIA IGNORATA			x	x	
NITZSCHIA LATENS		x			
NITZSCHIA MICROCEPHALA		x			
NITZSCHIA PALEA		x		x	x
NITZSCHIA SP.	x	x	x	x	x
PINNULARIA INTERMEDIA	x	x		x	x
PINNULARIA MAJOR	x	x	x	x	x
PINNULARIA SP.		x		x	x
PLEUROSIGMA DELICATISSIMA		x	x	x	x
RHOPALODIA GIBBERULA	x	x	x	x	x
RHOPALODIA MUSCULUS					x
STAURONEIS ANCEPS VAR. LINEARIS	x	x	x	x	x
SURIRELLA ANGUSTATA			x	x	
SURIRELLA LINEARIS	x			x	x
SURIRELLA OVATA		x			
SYNEDRA AMPHICEPHALA				x	
SYNEDRA MINUSCULA				x	x
SYNEDRA ULNARIA VAR. LANCEOLATA	x	x	x	x	x
SYNEDRA SPP.		x	x	x	
SYNEDRA SPP. VAR. LANCEOLATA	x				
THALASSIOSIRA FLUVIATILIS				x	

CHLOROPHYTA					
ANKISTRODESMUS SP.				x	x
AULOCHAETA SP.	x	x	x	x	x
CHARACIUM SP.			x		
CLOSTERIUM SP.		x			
DRAPARNALDIA SP.				x	
ENTEROMORPHA SP.	x	x	x	x	x
UNIDENTIFIED GREEN COCCOID			x		x
UEDOGONIUM SP.		x			x

x = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
PROSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 27
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	X					
ACHNANTHES EXIGUA		X				
ACHNANTHES HAUCKIANA					X	
ACHNANTHES HAUCKIANA VAR. POSTRATA				X		
AMPHORA VENETA		X	X	X	X	
CALONEIS VENTRICOSA	X	X	X	X	X	X
COCCONEIS PEDICULUS				X		X
CYCLOTELLA MENEGHINIANA	X	X	X	X		X
CYCLOTELLA STELLIGERA					X	
CYMBELLA AFFINIS		X			X	
CYMBELLA CISTULA				X		
CYMBELLA MEXICANA	X		X			
CYMBELLA MINUTA VAR. SILESIACA				X		
CYMBELLA SINUATA VAR. ANTIQUE	X					
CYMBELLA SP.	X					
CYMBELLA TUMIDA				X	X	
DIATOMA HIEMALE	X		X	X	X	X
DIATOMA VULGARE	X					X
DIATOMA VULGARE VAR. GRANDE		X		X		
DIATOMA SP.	X	X				
EPITHEMIA SOREX	X	X		X	X	X
EPITHEMIA TURGIDA				X	X	
EUNOTIA PECTINALIS	X					
FRAGILARIA LEPTOSTAURON				X		
FRAGILARIA PINNATA	X					
GOMPHONEIS HERCULEANA				X		
GOMPHONEMA ACUMINATUM					X	X
GOMPHONEMA DICHOTOMUM	X				X	X
GOMPHONEMA INTRICATUM VAR. PUMILA	X	X	X		X	X
GOMPHONEMA PARVULUM					X	
GOMPHONEMA SIMUS	X			X		
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM				X		
GOMPHONEMA SP.	X	X	X	X	X	X
HANTZSCHIA AMPHIOXYS	X					
MASTOGLOIA ELLIPTICA	X	X				X
NAVICULA AVENSIS	X					
NAVICULA AURICULATA	X	X		X	X	
NAVICULA FLUMENSIS	X	X		X	X	
NAVICULA EXIGUA VAR. CALLITAE	X	X	X		X	
NAVICULA LANCEOLATA				X		
NAVICULA LIZONIENSIS	X	X	X	X	X	
NAVICULA MENISCULUS VAR. [illegible]	X		X	X		
NAVICULA MINIMA	X			X	X	
NAVICULA NETHA	X				X	X

NAVICELLA PELLICULOSA	x				x	x
NAVICULA PUPULA				x		
NAVICULA PYGMAEA					x	
NAVICELLA SALINARUM			x	x	x	
NAVICELLA SALINARUM VAR. INTERMEDIA	x		x	x	x	x
NAVICULA SIMPLEX		x				
NAVICELLA VIRIDULA			x			
NAVICULA VIRIDULA VAR. AVENACEA	x	x	x	x	x	
NAVICULA VIRIDULA VAR. LINEARIS						x
NAVICELLA SP.	x				x	
NITZSCHIA DISSIPATA	x	x	x	x	x	x
NITZSCHIA FONTICOLA	x					
NITZSCHIA GRACILIS	x	x		x		
NITZSCHIA PULSATICA				x	x	x
NITZSCHIA LINEARIS				x	x	x
NITZSCHIA MICROCEPHALA	x		x	x	x	
NITZSCHIA PALEA				x		
NITZSCHIA SIGMOIDEA	x	x		x	x	
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	x					x
PINNULARIA BIGERS					x	
PINNULARIA BOREALIS			x			
PINNULARIA BREBISSONII	x	x	x	x		
PINNULARIA INTERMEDIA	x	x	x	x	x	x
PINULARIA MESOLEPTA	x					
RHOICOSPHENIA CURVATA	x	x				
RHOPALODIA GIBBA	x	x		x	x	x
RHOPALODIA MUSCULUS	x		x	x	x	x
SURIRELLA ANGUSTATA		x			x	
SURIRELLA OVALIS	x					
SURIRELLA OVATA	x			x		
SYNEDRA DELICATISSIMA		x		x		
SYNEDRA MINUSCULA	x					x
SYNEDRA PULCHELLA VAR. LANCEOLATA	x					
SYNEDRA ULNA VAR. CONSTRICTA			x			
CHLOROPHYTA						
ANKISTRODESMUS SP.	x		x	x	x	x
CHARA SP.				x		
CLADOPHORA GLOMERATA	x	x		x		
CLADOPHORA SP.	x			x		
DRAPARNALDIA SP.	x			x		
ELOEOCYSTIS VESICULOSA			x	x		
MICROSPORA SP.				x		
MOUGEOTIA SP.				x		x

x = TAXON OBSERVED AT SAMPLING STATION

PERIPHYTON SPECIES LIST
RROSC AQUATIC STUDIES
SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 29
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
BACILLARIOPHYTA						
ACHNANTHES EXIGUA	x	x			x	
ACHNANTHES HAUCKIANA				x		
AMPHORA VENETA		x	x	x	x	
ASTERIONELLA FORMOSA		x				
CALONEIS VENTRICOSA	x	x	x	x	x	x
COCCONEIS PEDICULUS				x	x	x
CYCLOTELLA RODANICA		x	x	x	x	
CYCLOTELLA MENEGHINIANA	x	x	x	x	x	x
CYMBELLA AFFINIS	x	x	x	x	x	x
CYMBELLA CISTULA				x		
CYMBELLA MINUTA VAR. SILESIACA	x	x	x	x	x	
CYMBELLA SINUATA VAR. ANTIQUE	x					
CYMBELLA SP.	x			x	x	
CYMBELLA TUMIDA	x	x	x	x	x	x
DIATOMA HIEMALE	x	x	x	x	x	x
DIATOMA TENUE VAR. ELONGATUM						x
DIATOMA VULGARE	x					x
DIATOMA VULGARE VAR. GRANDE		x	x	x	x	x
DIATOMA SP.	x					
ENIGMONEIS OBNATA			x	x	x	
EPITHEMIA SOREX	x	x	x	x	x	x
EPITHEMIA TURGIDA			x	x	x	x
EUNOTIA PECTINALIS				x	x	
FRAGILARIA LEPTOSTAURON	x	x		x	x	x
GOMPHONEIS HERCULEANA	x	x	x	x	x	
GOMPHONEMA ACUMINATUM				x		
GOMPHONEMA INTRICATUM			x	x	x	
GOMPHONEMA INTRICATUM VAR. PUMILA				x		
GOMPHONEMA SIMUS	x	x		x	x	
GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM	x	x	x	x	x	x
GOMPHONEMA SP.	x	x	x	x	x	
MASTOGLOIA ELLIPTICA	x	x	x		x	x
MELOSIRA SP.				x		
MELOSIRA VARIANS	x					
NAVICULA BICUCULATA		x		x	x	x
NAVICULA CINCTA		x				
NAVICULA CINCTA VAR. HUSTEDTII		x	x	x	x	
NAVICULA ERIENSIS	x	x		x	x	x
NAVICULA EXIGUA VAR. CAPITATE	x			x		x

NAVICULA LANCEOLATA						x
NAVICULA LUZONENSIS	x		x	x		
NAVICULA PERISCULUS VAR. UPSALIENSIS	x		x			x
NAVICULA MUTICA						x
NAVICULA RETIA			x		x	
NAVICULA PELLICULOSA	x		x	x	x	
NAVICULA PUPULA	x	x	x	x	x	x
NAVICULA PYGMAEA					x	
NAVICULA RADIOSA				x		
NAVICULA SALINARUM				x		
NAVICULA SALINARUM VAR. INTERMEDIA	x	x	x	x	x	x
NAVICULA SECRETA VAR. APICULATA		x				
NAVICULA SIMPLEX		x	x	x	x	
NAVICULA TRIPUNCTATA		x				
NAVICULA VIRIDULA		x			x	
NAVICULA VIRIDULA VAR. AVENACEA	x	x	x		x	x
NAVICULA SP.		x				
NITZSCHIA APICULATA	x					
NITZSCHIA DISSIPATA	x	x	x	x	x	x
NITZSCHIA EPITHEMOIDES			x		x	
NITZSCHIA GRACILIS	x	x	x	x		x
NITZSCHIA PULSATICA				x	x	x
NITZSCHIA LINEARIS	x	x	x	x		x
NITZSCHIA ROMANA				x		
NITZSCHIA SIGMOIDEA	x	x	x			
NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	x					
PINNULARIA BREBISSONII	x	x	x			
PINNULARIA INTERMEDIA		x	x	x	x	x
PINULARIA MESOLEPTA	x					
PINNULARIA SP.	x		x	x		x
RHOICOSPHENIA CURVATA	x					
RHOPALODIA GIBBA	x	x	x	x	x	x
RHOPALODIA GIBBERULA						x
RHOPALODIA MUSCULUS	x		x	x		x
SURIRELLA LINEARIS						x
SURIRELLA OVATA	x	x	x	x	x	
SYNEDRA ACUS		x	x	x	x	x
SYNEDRA AMPHICEPHALA						x
SYNEDRA DELICATISSIMA		x		x		x
SYNEDRA MINUSCULA	x			x	x	x
SYNEDRA PULCHELLA VAR. LANCEOLATA	x			x		x
SYNEDRA ULNA			x	x		
SYNEDRA ULNA VAR. CONSTRICTA			x			
THALASSIOSIRA FLUVIATILIS		x				
UNIDENTIFIED PENNATE DIATOMS				x		

CHLOROPHYTA

ANKISTRODESMUS SP.	X	X	X	X	X	X
AULOCHAETA SP.						X
CHARA SP.		X	X	X	X	X
CLADOPHORA GLOMERATA	X	X	X	X	X	X
CLADOPHORA SP.	X	X	X	X	X	X
CLOSTERIUM SP.		X				
DRAPARNALDIA SP.	X	X	X		X	X
GLOEOCYSTIS SP.				X		
GLOEOCYSTIS VESICULOSA						X
MICROSPORA SP.	X	X		X	X	X
MOUGEOTIA SP.				X		X
PEDIASTRUM DUPLEX					X	

X = TAXON OBSERVED AT SAMPLING STATION

APPENDIX 4-2.2

Periphyton Enumeration Data for all Stations by Sampling Date for 1980

PERIPHYTON BENCH SHEET

RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 0421MO
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	3.9600	3.9600	3.9600	3.9600
NUMBER OF TRANSECTS	1	2	3	3
NUMBER OF CROPS	10	10	5	10
COVERSLIP AREA	484	484	484	484
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	8	47	43	42
1ACMIN	ACHNANTHES MINUTISSIMA	59	60	13	15
1AMVEN	AMPHORA VENETA	2			
1CAVEN	CALONEIS VENTRICOSA				P
1COCPE	COCCONEIS PEDICULUS	P			
1CYCME	CYCLOTELLA MENEGHINIANA		2		
1CYMAF	CYMBELLA AFFINIS				1
1CYMCY	CYMBELLA CYMBIFORMIS				P
1CYMMI	CYMBELLA MINUTA		3		1
1CYMSI	CYMBELLA SINUATA	2	6	1	
1DIHIE	DIATOMA HIEMALE			2	5
1DISPP	DIATOMA SP.	2	7		
1EPSOR	EPITHEMIA SOREX		P	2	1
1FRACA	FRAGILARIA CAPUCINA			1	
1FRAVA	FRAGILARIA VAUCHERIAE	1	78	100	82
1GOACU	GOMPHONEMA ACUMINATUM				P
1GOANG	GOMPHONEMA ANGUSTATUM	P	4	6	
1GOOLI	GOMPHONEMA OLIVACEUM	4	10		1
1GOPAR	GOMPHONEMA PARVULUM	P	P		13
1GYSPE	GYROSIGMA SPENCERII				1
1HANAM	HANTZSCHIA AMPHIOXYS				1

1MERCI	MERIDION CIRCULARE	P	10	11	12
1NAARV	NAVICULA ARVENSIS			1	
1NAAUR	NAVICULA AURICULATA				1
1NACRY	NAVICULA CRYPTOCEPHALA	4	2		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P		9	11
1NAHEU	NAVICULA HEUFLERI				3
1NAPEL	NAVICULA PELLICULOSA	P	6	2	5
1NAPYG	NAVICULA PYGMAEA			1	
1NASEA	NAVICULA SECRETA VAR. APICULATA	9	43	24	32
1NATRI	NAVICULA TRIPUNCTATA		P	P	
1NAVIR	NAVICULA VIRIDULA	209	21	13	
1NIAPI	NITZSCHIA APICULATA		1		
1NIDEN	NITZSCHIA DENTICULA	1	P		
1NIDIS	NITZSCHIA DISSIPATA	1	P		
1NIFON	NITZSCHIA FONTICOLA	P	8	7	4
1NIFRU	NITZSCHIA FRUSTULUM		5	7	5
1NIHOL	NITZSCHIA HOLSATICA		19		
1NILAT	NITZSCHIA LATENS	P	P		P
1NILIN	NITZSCHIA LINEARIS	P	14	8	16
1NIPAL	NITZSCHIA PALEA		3	4	10
1PIBOR	PINNULARIA BOREALIS		2	1	
1PIBRE	PINNULARIA BREBISSONII	P		P	
1PHCUR	PHOICOSPHENIA CURVATA	P			
1RHGIV	RHOPALODIA GIBBA		P		3
1SUOVL	SURIRELLA OVALIS				3
1SUOVA	SURIRELLA OVATA	14	54	39	46
1SYFAS	SYNEDRA FASCICULATA				P
1SYMIN	SYNEDRA MINUSCULA	P	4	2	9
1SYULN	SYNEDRA ULNA	P	P		P
2CLAGL	CLADOPHORA GLOMERATA	P			
2MICSP	MICROSPORA SP.		P	29	P
2ULSPP	ULOTHRIX	P			100
2ULZON	ULOTHRIX ZONATA		104		
4PHSPP	PHORMIDIUM SP.	189	22		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042180
SAMPLE STATION DESCRIPTION - COPPAL GULCH ANALYST - DUFFORD PROJECT NO. - 179

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	2.2500	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	4	3	3	3
COVERSLIP AREA	625	625	484	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	6	2	3	30
1ACMIN	ACHNANTHES MINUTISSIMA	194	66	105	80
1AMOVP	AMPHORA OVALIS			P	
1CAAMP	CALONEIS AMPHISBAENA	P	P	P	P
1CAVEN	CALONEIS VENTRICOSA				P
1COCPE	COCCONEIS PEDICULUS	P			
1COCPL	COCCONEIS PLACENTULA	P			
1CYCME	CYCLOTELLA MENEGHINIANA	P			P
1CYMAF	CYMBELLA AFFINIS				1
1CYMCY	CYMBELLA CYMBIFORMIS			P	
1CYMMI	CYMBELLA MINUTA				1
1DEELE	DENTICULA ELEGANS	P			2
1DITEE	DIATOMA TENUE VAR. ELONGATUM				P
1FRACA	FRAGILARIA CAPUCINA			P	
1FRACR	FRAGILARIA CROTONENSIS	P		P	
1FRAVA	FRAGILARIA VAUCHERIAE			1	1
1GOANG	GOMPHONEMA ANGUSTATUM		1		1

1GOINT	GOMPHONEMA INTRICATUM	P			
1GYSPE	GYROSIGMA SPENCERII	P	P	P	2
1HANAM	HANTZSCHIA AMPHIOXYS			P	
1MERCI	MERIDION CIRCULARE		P		
1NAARV	NAVICULA ARVENSIS		P		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P	P	P	P
1NACUS	NAVICULA CUSPIDATA		P	P	1
1NAHEU	NAVICULA HEUFLERI	P			
1NAPEL	NAVICULA PELLICULOSA	2			
1NARHY	NAVICULA RHYNCHOCEPHALA	6			
1NASEA	NAVICULA SECRETA VAR. APICULATA	81	105	37	119
1NAVIR	NAVICULA VIRIDULA	2	5	P	7
1NIACI	NITZSCHIA ACICULARIS	10	3	P	8
1NIDEN	NITZSCHIA DENTICULA		P		
1NIDIS	NITZSCHIA DISSIPATA	1			
1NIFON	NITZSCHIA FONTICOLA		2		P
1NIHOL	NITZSCHIA HOLSATICA	P		P	P
1NIHUN	NITZSCHIA HUNGARICA		1		
1NILAT	NITZSCHIA LATENS	P		P	P
1NILIN	NITZSCHIA LINEARIS	1	10		6
1NIPAL	NITZSCHIA PALEA				2
1PIBRE	PINNULARIA BREBISSONII	P	P	P	2
1RHCUR	RHOICOSPHENIA CURVATA		P		
1RHGIV	RHOPALODIA GIBBA	P	P		
1SUOVL	SURIRELLA OVALIS	P			
1SUOVA	SURIRELLA OVATA	P	3	6	
1SYFAS	SYNEDRA FASCICULATA		P		
1SYMIN	SYNEDRA MINUSCULA				1
1SYULN	SYNEDRA ULNA	7	P	4	6
1THSPP	THALASSIOSIRA FLUVIATILIS	1	1		1
2GRCOC	UNIDENTIFIED GREEN COCCOID	P			
2STITE	STIGEOCLONIUM TENUE	P			
4ANASP	ANABAENA SP.	1			P
4OSSPP	OSCILLATORIA SP.				P
9EUSPP	EUGLENA SP.	P	P	P	P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 20
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042180
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600
NUMBER OF TRANSECTS	4	6	3	5	5	1	6	4
NUMBER OF DROPS	3	3	4	3	3	3	4	3
COVERSLIP AREA	484	484	484	484	484	484	484	484
DROPS/ML	50	50	50	50	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA		7	9	11	6	1		
1ACMIN	ACHNANTHES MINUTISSIMA	7	60	100	2				26
1AMOVP	AMPHORA OVALIS							P	
1CAAMP	CALONEIS AMPHISBAENA		P		P	P			
1COCPL	COCCONEIS PLACENTULA								P
1CYCME	CYCLOTELLA MENEGHINIANA		P		4			P	
1CYMCY	CYMBELLA CYMBIFORMIS	1							
1CYMME	CYMBELLA MEXICANA		P						
1CYMMI	CYMBELLA MINUTA				3				
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P	4	P		P	P		P
1DIMIE	DIATOMA HIEMALE	5		2	2		4		
1DITEE	DIATOMA TENUE VAR. ELONGATUM	P			11				
1DISPP	DIATOMA SP.		2			4	10		
1ENPAL	ENTOMONEIS PALUDOSA		2	4	2	P	P	1	2
1EPSOP	EPITHEMIA SOREX			P	2				
1FRACA	FRAGILARIA CAPUCINA	2	7	29	16	4	1	66	50
1FRAVA	FRAGILARIA VAUCHERIAE	9	2	23	32	10	52	1	P
1GOACU	GOMPHONEMA ACUMINATUM			2					
1GOANG	GOMPHONEMA ANGUSTATUM	1		1	3	3		5	P
1GOINT	GOMPHONEMA INTRICATUM	P					P		P
1GOOLI	GOMPHONEMA OLIVACEUM							20	2
1GOPAR	GOMPHONEMA PARVULUM	P	2		P		P		
1GYSPE	GYROSIGMA SPENCERII	P	P						

1HANAM	HANTZSCHIA AMPHIOXYS					P			
1MELSP	MELOSIRA SP.					2			
1MERCI	MERIDION CIRCULARE		2	1	2				
1NAARV	NAVICULA ARVENSIS		P	P		P			P
1NACRY	NAVICULA CRYPTOCEPHALA	P				P	1	14	20
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA						C	6	1
1NACUS	NAVICULA CUSPIDATA							P	
1NAHEU	NAVICULA HEUFLERI	7							
1NAMIN	NAVICULA MINIMA		2						
1NAPEL	NAVICULA PELLICULOSA	102	9	28	4	1	1		50
1NAPYG	NAVICULA PYGMAEA			287			P		
1NARAD	NAVICULA RADIOSA		1						
1NARHY	NAVICULA RHYNCHOCEPHALA			P				P	
1NASEA	NAVICULA SECRETA VAR. APICULATA	14	29	19	15	5	P		P
1NATRI	NAVICULA TRIPUNCTATA	P					P		
1NAVIR	NAVICULA VIRIDULA	P	P	P	3		P	P	2
1NIACI	NITZSCHIA ACICULARIS		1						
1NIAPI	NITZSCHIA APICULATA	P		P	P	P		P	
1NIDIS	NITZSCHIA DISSIPATA			1	1				
1NIFON	NITZSCHIA FONTICOLA	2	2	3	1	1		1	11
1NIFRU	NITZSCHIA FRUSTULUM	1							
1NIHOL	NITZSCHIA HOLSATICA	P				11	30		2
1NIHUN	NITZSCHIA HUNGARICA		2	1			1	1	
1NILIN	NITZSCHIA LINEARIS	1	P	1	4	P		P	2
1NIPAL	NITZSCHIA PALEA	P	15	28	14	4	5	3	2
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS				P				
1NISPP	NITZSCHIA SP.	P							
1PIBRE	PINNULARIA BREBISSONII		P				1		
1PISPP	PINNULARIA SP.			P					
1SULIN	SURIRELLA LINEARIS			P					
1SUOVA	SURIRELLA OVATA	14	102	30	102	35	43	40	36
1SYAMP	SYNEDRA AMPHICEPHALA							P	
1SYMIN	SYNEDRA MINUSCULA	2	2				1		
1SYULN	SYNEDRA ULNA	2	1	1				P	1
1SYSPP	SYNEDRA SP.			4					
2GRCOC	UNIDENTIFIED GREEN COCCOID								P
2SPISP	SPIROGYRA SP.	3			P		P		
2STITE	STIGEOCLONIUM TENUE								P
2ULSPP	ULOTHRIX				P	P	P		
4ANASP	ANABAENA SP.						P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042180
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600	3.9600
NUMBER OF TRANSECTS	2	2	1	2	2	1	1	1
NUMBER OF DROPS	31	30	30	30	30	30	15	30
COVERSLIP AREA	484	484	484	484	484	484	484	484
DROPS/ML	50	50	50	50	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACLAN	ACHNANTHES LANCEOLATA	2	1	P	P	2	P	6	4
1ACMIN	ACHNANTHES MINUTISSIMA	1		1	6			5	4
1AMOVP	AMPHORA OVALIS				P				
1COCPE	COCCONEIS PEDICULUS	2	P		P				
1COCPL	COCCONEIS PLACENTULA			P	P				
1CYCME	CYCLOTELLA MENEGHINIANA						P	1	2
1CYMMI	CYMBELLA MINUTA		1		P	1		P	1
1DIMIE	DIATOMA MIEMALE			12					
1DITEE	DIATOMA TENUE VAR. ELONGATUM		4		3			P	
1ENPAL	ENTOMONEIS PALUDOSA	2	P	P	P	P	5	5	3
1EPSOR	EPITHEMIA SOREX				2				
1FRACA	FRAGILARIA CAPUCINA	40	72	48	41	6	3		20
1FRACO	FRAGILARIA CONSTRUENS				P				
1FRAPI	FRAGILARIA PINNATA	1							
1FRAVA	FRAGILARIA VAUCHERIAE	10	33	9	105	76	58	138	64
1GOACU	GOMPHONEMA ACUMINATUM					5			
1GOANG	GOMPHONEMA ANGUSTATUM		6	2	P	P	P	6	P
1GOGRA	GOMPHONEMA GRACILE								1
1GOOLI	GOMPHONEMA OLIVACEUM	21				5	3	2	
1GOPAR	GOMPHONEMA PARVULUM	1		P			4	P	16
1GOSPP	GOMPHONEMA SP.		1						
1GYSPE	GYROSIGMA SPENCERII			P			F		
1MELSP	MELOSIRA SP.				P				
1NAARV	NAVICULA ARVENSIS	1		P					
1NACRY	NAVICULA CRYPTOCEPHALA	18	25	17	10	23	14		2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA					2			
1NAHEU	NAVICULA HEUFLERI	P					F		P
1NAMUT	NAVICULA MUTICA							P	
1NAPEL	NAVICULA PELLICULOSA	1	P	P	P	P	F	5	10
1NASEC	NAVICULA SECRETA								30
1NASEA	NAVICULA SECRETA VAR. APICULATA				P			P	P
1NATRI	NAVICULA TRIPUNCTATA		P						
1NAVIR	NAVICULA VIRIDULA	1	P	2		2		P	2
1NIAPI	NITZSCHIA APICULATA					2	P		
1NIDIS	NITZSCHIA DISSIPATA		3			1			P
1NIEPI	NITZSCHIA EPITHEMOIDES	P							

1NIFON	NITZSCHIA FONTICOLA	P	P	P	P	P	P	11	2
1NIFRU	NITZSCHIA FRUSTULUM	P	P	P	P	P	P	5	P
1NIHOL	NITZSCHIA HOLSATICA	2	8	3	15	18	31	27	70
1NIHUN	NITZSCHIA HUNGARICA			1				2	2
1NILAT	NITZSCHIA LATENS								1
1NILIN	NITZSCHIA LINEARIS	2	3	1		3	P	1	4
1NIPAL	NITZSCHIA PALEA	2	6	1	2	1	5	6	8
1NISPP	NITZSCHIA SP.								1
1PINOR	PINNULARIA NOBILIS								P
1PIBPE	PINNULARIA BREBISSONII								P
1PIINT	PINNULARIA INTERMEDIA					1			
1SUOVL	SURIRELLA OVALIS							1	P
1SUOVA	SURIRELLA OVATA	274	119	100	60	133	100	250	352
1SYMIN	SYNEDRA MINUSCULA	1			5				
1SYULN	SYNEDRA ULNA	1				1	P		
1SYSPP	SYNEDRA SP.								P
2MICSP	MICROSPORA SP.							P	
4ANASP	ANABAENA SP.				P				
4PHSPP	PHORMIDIUM SP.	P		P					
5EUSPP	EUGLENA SP.			P	P			P	P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 27
NUMBER OF REPLICATES - 4
AREA SCRAPED - 9000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042180
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	3.9600	3.9600	3.9600	3.9600
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF CROPS	5	2	3	2
COVERSLIP AREA	484	484	484	484
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	14	4	1	1
1ACLAN	ACHNANTHES LANCEOLATA	P	P	P	P
1ACLIN	ACHNANTHES LINEARIS	P			
1ACMIC	ACHNANTHES MICROCEPHALA	P		P	
1ACMIN	ACHNANTHES MINUTISSIMA	25	18	1	4
1AMOVP	AMPHORA OVALIS		P	P	
1AMPEP	AMPHORA PERPUSILLA	P	3	2	4
1CAAMP	CALONEIS AMPHISBAENA		1		
1COCPE	COCCONEIS PEDICULUS	P		P	
1COCPL	COCCONEIS PLACENTULA	1	3	P	5
1CYMAF	CYMBELLA AFFINIS	3	P		P
1CYMMI	CYMBELLA MINUTA	2	2		1
1CYMSI	CYMBELLA SINUATA	P	P		P
1CYMSA	CYMBELLA SINUATA VAR. ANTIQUE	P	P		
1DIVUL	DIATOMA VULGARE	P			2

1EPSOP	EPITHEMIA SOREX	90	51	11	71
1EPTUR	EPITHEMIA TURGIDA	3	P	P	
1EUNPS	EUNOTIA PECTINALIS			P	
1FRACA	FRAGILARIA CAPUCINA		2		
1FRACO	FRAGILARIA CONSTRUENS	P			
1FRALE	FRAGILARIA LEPTOSTAURON	P	1		
1FRAVA	FRAGILARIA VAUCHERIAE	6		1	4
1GOOLI	GOMPHONEMA OLIVACEUM	27	10	2	20
1GOPAR	GOMPHONEMA PARVULUM	4	P	P	P
1NACRY	NAVICULA CRYPTOCEPHALA	42	22	17	17
1NAHEU	NAVICULA HEUFLERI				1
1NAMIN	NAVICULA MINIMA				1
1NAPEL	NAVICULA PELLICULOSA			1	
1NARAD	NAVICULA RADIOSA				1
1NARHY	NAVICULA RHYNCHOCEPHALA	4			2
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	3			
1NASEA	NAVICULA SECRETA VAR. APICULATA	3		4	
1NATRI	NAVICULA TRIPUNCTATA		P	2	
1NAVIR	NAVICULA VIRIDULA	365	247	P	233
1NAVIL	NAVICULA VIRIDULA VAR. LINEARIS				2
1NIDIS	NITZSCHIA DISSIPATA	65	35	12	41
1NIFON	NITZSCHIA FONTICOLA	4	1		
1NIFRU	NITZSCHIA FRUSTULUM	1	3	2	3
1NILIN	NITZSCHIA LINEARIS	1			
1NIPAL	NITZSCHIA PALEA	6	3		7
1NISPP	NITZSCHIA SP.	11	1	2	2
1RHCUR	RHOICOSPHENIA CURVATA	27	4	P	3
1SUOVA	SURIRELLA OVATA	12	3	6	2
2CLAGL	CLADOPHORA GLOMERATA		P		
2CLASP	CLADOPHORA SP.			P	P
4CHAMI	CHAMAESIPHON INCRUSTANS		P		
4PHSPP	PHORMIDIUM SP.	P	3	P	P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 29
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 042180
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	3.9600	3.9600	3.9600	3.9600
NUMBER OF TRANSECTS	1	1	2	1
NUMBER OF DROPS	2	2	2	3
COVERSLIP AREA	484	484	484	484
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	1			
1ACLAN	ACHNANTHES LANCEOLATA	4	4	1	2
1ACMIC	ACHNANTHES MICROCEPHALA	1	1		
1ACMIN	ACHNANTHES MINUTISSIMA	46	19	19	54
1AMOVP	AMPHORA OVALIS				P
1AMPER	AMPHORA PERPUSILLA	P	2	4	3
1COCPE	COCCONEIS PEDICULUS			P	
1COCPL	COCCONEIS PLACENTULA	5	18	1	7
1CYCRO	CYCLOTELLA RODANICA				1
1CYMAF	CYMBELLA AFFINIS			P	4
1CYMMI	CYMBELLA MINUTA	6	1	1	2
1CYMSI	CYMBELLA SINUATA	15	9	20	12
1DEFLE	DENTICULA ELEGANS				1
1DIVUL	DIATOMA VULGARE		1		1
1EPSOR	EPITHEMIA SOREX		100	38	100
1EPTUR	EPITHEMIA TURGIDA		1	1	
1FRACA	FRAGILARIA CAPUCINA	2	6	2	
1FRACR	FRAGILARIA CROTONENSIS			P	
1FRALE	FRAGILARIA LEPTOSTAURON		1		2
1FRAPI	FRAGILARIA PINNATA		1		
1FRAVA	FRAGILARIA VAUCHERIAE	1			10
1GOMER	GOMPHONEIS HERCULEANA		1		
1GODIC	GOMPHONEMA DICHOTOMUM		5	3	1

1GOINT	GOMPHONEMA INTRICATUM		2		P
1GOOLI	GOMPHONEMA OLIVACEUM	38	7	29	46
1GOPAR	GOMPHONEMA PARVULUM	1	1		
1HAARC	HANNAEA ARCUS		1		
1NAAUP	NAVICULA AUPICULATA			1	
1NACIN	NAVICULA CINCTA		2	1	
1NACRY	NAVICULA CRYPTOCEPHALA	11		R	25
1NAHEU	NAVICULA HEUFLERI			3	5
1NAMIN	NAVICULA MINIMA	1			
1NAPEL	NAVICULA PELLICULOSA	2	1		
1NARAD	NAVICULA RADIOSA	1			
1NARHY	NAVICULA RHYNCHOCEPHALA	1			1
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA		1	2	1
1NATRI	NAVICULA TRIPUNCTATA				1
1NAVIR	NAVICULA VIRIDULA	P	7R	100	182
1NIDIS	NITZSCHIA DISSIPATA	50	11	71	104
1NIFON	NITZSCHIA FONTICOLA	15	1	2	1
1NIFRU	NITZSCHIA FRUSTULUM	1	1		
1NILIN	NITZSCHIA LINEARIS		1	1	1
1NIPAL	NITZSCHIA PALEA	2	3	20	20
1NISPP	NITZSCHIA SP.		3	7	17
1RHCUR	RHOICOSPHENIA CURVATA	4	1		
1RHMUS	RHOPALODIA MUSCULUS			1	
1SUOVA	SURIRELLA OVATA	3	2	3	3
1SYULN	SYNEDRA ULNA		P		
2GRCOC	UNIDENTIFIED GREEN COCCOID	P	P		
2MICSP	MICROSPORA SP.	P			
2STTE	STIGEOCLONIUM TENUE	P			
4ANASP	ANABAENA SP.	P		P	P
4LYNSP	LYNGBYA SP.	P			
4PHSPP	PHORMIDIUM SP.	P	P	P	P
5EUSPP	EUGLENA SP.			P	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

MAY

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
DROPS/ML - 40 AREA SCRAPED - 5000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 179

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	2.7000	.4500	.4500	.4500
NUMBER OF TRANSECTS	1	2	1	1
NUMBER OF DROPS	10	50	40	20
COVERSLIP AREA	625	625	625	625

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	3			
1ACLAN	ACHNANTHES LANCEOLATA		11	2	
1ACMIN	ACHNANTHES MINUTISSIMA	41	23	11	8
1AMOVP	AMPHORA OVALIS		2		2
1CYMCI	CYMBELLA CISTULA		2		
1CYMCY	CYMBELLA CYMBIFORMIS		1		
1CYMPI	CYMBELLA MINUTA				1
1EPSUR	EPITHEMIA SOREX			2	
1FRAVA	FRAGILARIA VAUCHERIAE	2	6	5	7
1GOANG	GOMPHONEMA ANGUSTATUM	P			
1GOPAR	GOMPHONEMA PARVULUM	2	1	1	9
1GYSPE	GYROSIGMA SPENCERII				1
1HANAM	HANTZSCHIA AMPHIOXYS	1			1
1MERCI	MERIDION CIRCULARE				1
1NAMIN	NAVICULA MINIMA		1		1
1NAPEL	NAVICULA PELLICULOSA	P			
1NASEA	NAVICULA SECRETA VAR. APICULATA	6	8	3	8
1NAVIR	NAVICULA VIRIDULA	3	17		
1NIDEN	NITZSCHIA DENTICULA			2	
1NIFON	NITZSCHIA FONTICOLA		2	1	2
1NIFRU	NITZSCHIA FRUSTULUM	P	1		
1NILAT	NITZSCHIA LATENS		1		
1NILIN	NITZSCHIA LINEARIS			1	3
1NISPP	NITZSCHIA SP.	2			
1PISPP	PINNULARIA SP.			1	
1SUOVL	SURIRELLA OVALIS	1			2
1SYFAS	SYNEDRA FASCICULATA		3		2
1VAUSP	VAUCHERIA SP.		8		
2GRCUC	UNIDENTIFIED GREEN COCCOID	P			
2UESPP	OEDOGONIUM SP.		P		
3ANASP	ANABAENA SP.	P			
3HAPSP	HAPALOSIPHON SP.		P		
3PHSPP	PHORMIDIUM SP.	20	3		4

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - CORPAL CULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.5000	3.0600	.3672	4.5000
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	5	3	2	10
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	2	30		3
1ACEXI	ACHNANTHES EXIGUA				1
1ACLAN	ACHNANTHES LANCEOLATA	14	2	5	2
1ACMIC	ACHNANTHES MICROCEPHALA				3
1ACMIN	ACHNANTHES MINUTISSIMA	16	187	55	130
1AMOVP	AMPHORA OVALIS			P	
1CAAMP	CALONEIS AMPHISBAENA		P	1	P
1COCPL	COCCONEIS PLACENTULA			1	
1CYCME	CYCLOTELLA MENEGHINIANA			2	
1CYMCI	CYMBELLA CISTULA			P	
1CYMMI	CYMBELLA MINUTA		1		2
1DEELE	DENTICULA ELEGANS			P	
1DITFE	DIATOMA TENUE VAR. ELONGATUM	2	1	3	
1FRACA	FRAGILARIA CAPUCINA		2		
1FRACP	FRAGILARIA CROTONENSIS	10		P	
1FRAVA	FRAGILARIA VAUCHERIAE	3	12	1	
1GOANG	GOMPHONEMA ANGUSTATUM		38		
1GOPAR	GOMPHONEMA PARVULUM	1	168		
1GOSUR	GOMPHONEMA SUBCLAVATUM		P		
1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM			1	
1GYSPE	GYROSIGMA SPENCERII			P	
1NACUS	NAVICULA CUSPIDATA		P	2	
1NAHEU	NAVICULA HEUFLERI				3
1NALUZ	NAVICULA LUZONENSIS			P	P
1NAMIN	NAVICULA MINIMA	1	P		
1NAMUT	NAVICULA MUTICA				5
1NANOT	NAVICULA NOTHA				2
1NAPEL	NAVICULA PELLICULOSA	6	5	27	20
1NAPYG	NAVICULA PYGMAEA		P		

1NASEA	NAVICULA SECRETA VAR. APICULATA	150	19	155	42
1NAVIR	NAVICULA VIRIDULA				1
1NIACI	NITZSCHIA ACICULARIS	31	4	39	2
1NIDEN	NITZSCHIA DENTICULA	4		1	1
1NIFON	NITZSCHIA FONTICOLA	3		2	
1NIFRU	NITZSCHIA FRUSTULUM	3			3
1NILIN	NITZSCHIA LINEARIS	2	P	5	1
1PIBRE	PINNULARIA BREBISSONII			P	
1PIMAI	PINNULARIA MAJOR			1	
1PISPP	PINNULARIA SP.	1			
1SUANG	SURIRELLA ANGUSTATA	1			
1SUOVL	SURIRELLA OVALIS			P	
1SUOVA	SURIRELLA OVATA	1		P	
1SYACU	SYNEDRA ACUS		8	P	2
1SYFAS	SYNEDRA FASCICULATA		1		
1SYMIN	SYNEDRA MINUSCULA	2	6		
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA		P		
1SYULN	SYNEDRA ULNA	6			
1THSPP	THALASSIOSIRA FLUVIATILIS			1	
2CLAGL	CLADOPHORA GLOMERATA		P	55	
2MICSP	MICROSPORA SP.		P		
2STITE	STIGEOCLONIUM TENUE		P		
3VAUSP	VAUCHERIA SP.			P	
4ANASP	ANABAENA SP.		P	P	
4DACSP	DACTYLOCOCCOPSIS SP.			P	
4HAPSP	HAPALOSIPHON SP.		P		
4OSSPP	OSCILLATORIA SP.		P	P	
5EUSPP	EUGLENA SP.		P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

PERIPHYTON BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

STATION - 20
NUMBER OF REPLICATES - 4
CROPS/ML - 40 AREA SCRAPED - 9000 MM2
ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 124

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.5000	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	1	1	1	1
NUMBER OF DROPS	40	20	30	30
COVERSLIP AREA	625	625	625	625

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
BACAFF	ACHNANTHES AFFINIS	1	1		
BACLAN	ACHNANTHES LANCEOLATA	6	16	3	19
BACMIN	ACHNANTHES MINUTISSIMA.	3	9	274	9
BCOCPL	COCCONEIS PLACENTULA	1		1	
BCYCME	CYCLOTELLA MENEGHENIANA	3	3	1	1
BCYMCI	CYMBELLA CISTULA		1		
BCYMMI	CYMBELLA MINUTA		2	2	3
BCYMMS	CYMBELLA MINUTA VAR. SILESIACA	1			
BDIVUL	DIATOMA VULGARE				1
BENPAL	ENCYONEIS PALUDOSA	3	9	1	
BFRCA	FRAGILARIA CAPUCINA			4	
BFRVA	FRAGILARIA VAUCHERIAE	100	102	10	113

IGOANG	GOMPHONEMA ANGUSTATUM	3	3		
IGOOLI	GOMPHONEMA OLIVACEUM		1		1
IGOPAR	GOMPHONEMA PARVULUM				4
INAMAL	NAVICULA MALOPHILA	4			1
INAMEU	NAVICULA MEUFLERI			4	1
INAPEL	NAVICULA PELLICULOSA	6	19	P	
INASEB	NAVICULA SECRETA VAR. APICULATA	24	11	4	4
INAVIR	NAVICULA VIRIDULA	1	1		
INASPP	NAVICULA SP.		1		
INIACI	NITZSCHIA ACICULARIS			1	2
INIFON	NITZSCHIA FONTICOLA	11	13	2	13
INIFRU	NITZSCHIA FRUSTULUM		6		
INIGRA	NITZSCHIA GRACILIS	P			
INIHOL	NITZSCHIA HOLSATICA	21	44		1
INIHUN	NITZSCHIA HUNGARICA		1	P	1
INILAT	NITZSCHIA LATENS	3	P		P
INILIN	NITZSCHIA LINEARIS	2	1		6
INIMIC	NITZSCHIA MICROCEPHALA	P			
INIPAL	NITZSCHIA PALEA	4	4	1	2
IPIBRE	PINNULARIA BREBISSONII	2	2		
IPLOFL	PLEUROSIGMA DELICATISSIMA		1		
ISUOVA	SURIRELLA OVATA	56	62	13	30
ISUOVL	SURIRELLA OVALIS		2	1	1
ISYRUN	SYNEDRA RUMPENS		7	4	1
ISYPUL	SYNEDRA PULCHELLA	1			
IUNPEN	UNIDENTIFIED PENNATE DIATOMS	1			
ZGACOC	UNIDENTIFIED GREEN COCCOID			P	
ZANASP	ANABAENA SP.			P	
ZOSSPP	OSCILLATORIA SP.		P	P	
ZPHSPP	PHORMIDIUM SP.			P	3
ZEUSPP	EUGLENA SP.	P			

P = PRESENT IN SAMPLE BUT NOT OBSERVED IN INSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	4.5000	4.5000	4.5000	4.5000	4.5000	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	1	1	1	1	4	3	11	3
NUMBER OF DROPS	40	20	30	30	20	30	0	40
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	50	50	50	50	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	3	1			3	1		4
1ACLAN	ACHNANTHES LANCEOLATA	6	16	3	10	9	6	13	24
1ACPIN	ACHNANTHES PINNTISSIMA	3	9	274	9		3	25	7
1COCPE	COCCONEIS PEDICULUS					1			
1COCPL	COCCONEIS PLACENTULA	1		1					
1CYCME	CYCLOTELLA MENEGHINIANA	3	3	1	1	1	2	7	4
1CYNCI	CYMBELLA CISTULA		3						
1CYMMI	CYMBELLA MINUTA		7	2	3	2			
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	1							
1CYMSI	CYMBELLA SINUATA							1	
1DIVUL	DIATOMA VULGARE				1				
1ENPAL	ENTOMONEIS PALUDOSA	3	9	1		7	6	4	
1EPSOR	EPITHEMIA SOREX					1			
1FPACA	FRAGILARIA CAPUCINA			4					
1FRAPI	FRAGILARIA PINNATA								1
1FRAVA	FRAGILARIA VAUCHERIAE	100	102	10	113	110	100	53	62
1GOANG	GOMPHONEMA ANGUSTATUM	3	3			3			

1GOOLI	GOMPHONEMA OLIVACEUM		1		1				
1GOPAR	GOMPHONEMA PARVULUM				4	6	4		2
1GYSPE	GYROSIGMA SPENCERII								1
1NACIN	NAVICULA CINCTA							1	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA						1	1	3
1NAHAL	NAVICULA HALOPHILA	4			1				
1NAHEU	NAVICULA HEUFLERI			4	1	1	3		1
1NAPEL	NAVICULA PELLICULOSA	6	18	P		5		1	
1NAPYG	NAVICULA PYGMAEA						1		
1NASEA	NAVICULA SECRETA VAR. APICULATA	24	11	4	4	12	15	13	16
1NAVIR	NAVICULA VIRIDULA	1	1					1	
1NASPP	NAVICULA SP.		1						3
1NIACI	NITZSCHIA ACICULARIS			1	2	1			
1NIAPI	NITZSCHIA APICULATA								4
1NIDIS	NITZSCHIA DISSIPATA								2
1NIFON	NITZSCHIA FONTICOLA	11	13	2	13	9	35	5	10
1NIFRU	NITZSCHIA FRUSTULUM		6						
1NIGRA	NITZSCHIA GRACILIS	P							P
1NIHOL	NITZSCHIA HOLSATICA	21	44		1	1	12	6	6
1NIHUN	NITZSCHIA HUNGARICA		1	P	1	P		1	3
1NILAT	NITZSCHIA LATENS	3	P		P				
1NILIN	NITZSCHIA LINEARIS	2	1		6	5	8	6	5
1NIMIC	NITZSCHIA MICROCEPHALA	P							
1NIPAL	NITZSCHIA PALEA	4	4	1	2	5			
1NITPL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS						2		3
1NISPP	NITZSCHIA SP.						15		
1PIBOR	PINNULARIA BOREALIS								1
1PIBRE	PINNULARIA BREBISSONII	2	2				1	1	1
1PIMAI	PINNULARIA MAIOR								1
1PLDEL	PLEUROSIGMA DELICATISSIMA		1						2
1RHGIV	RHOPALODIA GIBBA								1
1STALS	STAURONEIS ANCEPS VAR. LINEARIS								1
1SUOVL	SURIRELLA OVALIS		2	1	1	P			
1SUOVA	SURIRELLA OVATA	56	62	13	30	70	70	95	101
1SYMIN	SYNEDRA MINUSCULA		7	4	1		1	1	
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA	1				2	1		2
1SYULN	SYNEDRA ULNA								1
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1							
2GRCOC	UNIDENTIFIED GREEN COCCOID			P					P
2MICSP	MICROSPORA SP.					5	20	3	4
2SPISP	SPIROGYRA SP.					P			
4ANASP	ANABAENA SP.			P			P		
4OSSPP	OSCILLATORIA SP.		P	P				P	
4PHSPP	PHORMIDIUM SP.			P	3	P	2		
9EUSPP	EUGLENA SP.	P							

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 27
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.5000	4.5000	4.5000	4.5000
NUMBER OF TRANSECTS	4	1	1	1
NUMBER OF DROPS	10	10	4	37
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	5	2		
1ACLAN	ACHNANTHES LANCEOLATA	5	1		2
1ACMIC	ACHNANTHES MICROCEPHALA		1		
1ACMIN	ACHNANTHES MINUTISSIMA	31	4	1	14
1AMOVP	AMPHORA OVALIS	1			
1AMPER	AMPHORA PERPUSILLA	30	9	2	1
1CAVEN	CALONEIS VENTRICOSA			1	
1COCPE	COCCONEIS PEDICULUS				1
1COCPL	COCCONEIS PLACENTULA	5	6	4	1
1CYCME	CYCLOTELLA MENEGHINIANA	1	1		
1CYMAF	CYMBELLA AFFINIS	1			
1CYMPI	CYMBELLA PINUTA	4			4
1CYMS	CYMBELLA PINUTA VAR. SILESIACA	1	1		
1CYMSI	CYMBELLA SINUATA	7	5		6
1DEELE	DENTICULA ELEGANS		P		
1DIVUL	DIATOMA VULGARE	4	1	P	P
1EPSOR	EPITHEMIA SOREX	44	100	140	3
1EPTUR	EPITHEMIA TURGIDA			P	
1FRAPI	FRAGILARIA PINNATA		1		
1FRAVA	FRAGILARIA VAUCHERIAE	66	12	P	12
1FRUPH	FRUSTULIA RHOMBOIDES				2
1GOMER	GOMPHONEIS HERCULEANA			P	
1GOANG	GOMPHONEMA ANGUSTATUM	1	1		
1GOINT	GOMPHONEMA INTRICATUM	1		?	

1GOOLI	GOMPHONEMA OLIVACEUM	7	4		33
1GOPAR	GOMPHONEMA PARVULUM	4			
1GYSPE	GYROSIGMA SPENCERII			P	
1HAARC	HANNAEA ARCUS	2			1
1MERCI	MERIDION CIRCULARE	1			
1NACRY	NAVICULA CRYPTOCEPHALA	3	1		
1NAEXI	NAVICULA EXIGUA		1		1
1NANOT	NAVICULA NOTHA		33	4	P
1NAPEL	NAVICULA PELLICULOSA	1	1		
1NAPYG	NAVICULA PYGMAEA	4		3	
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	1			
1NASEA	NAVICULA SECRETA VAR. APICULATA	12	1	2	7
1NATRI	NAVICULA TRIPUNCTATA	7	6	P	5
1NAVIR	NAVICULA VIRIDULA	44	69	4	8
1NASPP	NAVICULA SP.	6			1
1NIACI	NITZSCHIA ACICULARIS		1		
1NIAPI	NITZSCHIA APICULATA	2			P
1NIDIS	NITZSCHIA DISSIPATA	4	6	1	
1NIFON	NITZSCHIA FONTICOLA	44	3		7
1NIFRU	NITZSCHIA FRUSTULUM		10	8	9
1NIHOL	NITZSCHIA HOLSATICA	3	12	3	
1NILIN	NITZSCHIA LINEARIS	3	4	P	2
1NIPAL	NITZSCHIA PALEA	5	10		
1PIBRE	PINNULARIA BREBISSONII				1
1PIMAI	PINNULARIA MAIOR				1
1PISPP	PINNULARIA SP.	1			
1PLDEL	PLEUROSIGMA DELICATISSIMA				2
1RHCUR	RHOICOSPHENIA CURVATA	1	5		P
1RHGIV	RHOPALODIA GIBBA			P	1
1RHGIB	RHOPALODIA GIBBERULA	2	1		1
1STHAN	STEPHANODISCUS HANTZSCHII	1			
1SUOVL	SURIRELLA OVALIS	2			
1SUOVA	SURIRELLA OVATA	9		1	3
1SYMIN	SYNEDRA MINUSCULA		7		
1SYULN	SYNEDRA ULNA	4	1		3
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		14		
2MICSP	MICROSPORA SP.			12	
2SPISP	SPIROGYRA SP.		12		
4ANASP	ANABAENA SP.			P	
4OSSPP	OSCILLATORIA SP.	R		P	
4PHSPP	PHORMIDIUM SP.	100	42	6	20

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 29
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 051980
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	4.5000	2.2500	4.5000	4.5000
NUMBER OF TRANSECTS	4	1	4	1
NUMBER OF DROPS	30	20	20	100
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	3			
1ACLAN	ACHNANTHES LANCEOLATA	3	1	4	
1ACMIN	ACHNANTHES MINUTISSIMA	9	30	100	18
1AMOVP	AMPHORA OVALIS				1
1AMPER	AMPHORA PERPUSILLA	90	120	6	20
1COCPL	COCCONEIS PLACENTULA	14	5	2	2
1CYCBO	CYCLOTELLA BODANICA	5			5
1CYCME	CYCLOTELLA MENEGHINIANA			1	
1CYMAF	CYMBELLA AFFINIS	1			
1CYMMI	CYMBELLA MINUTA	3	2		8
1CYMSI	CYMBELLA SINUATA	17	17	11	100
1DEELE	DENTICULA ELEGANS	1			
1DIHIM	DIATOMA HIEMALE VAR. MESODON	1		1	
1DIVUL	DIATOMA VULGARE	2			
1ENPAL	ENTOMONEIS PALUDOSA	2			
1EPSOR	EPITHEMIA SOREX	1	1	5	2
1FRALE	FRAGILARIA LEPTOSTAURON			1	
1FRAVA	FRAGILARIA VAUCHERIAE	15	1	7	4
1GOANG	GOMPHONEMA ANGUSTATUM			1	25
1GODIC	GOMPHONEMA DICHOTOMUM				1
1GOINT	GOMPHONEMA INTRICATUM	3		2	
1GOOLI	GOMPHONEMA OLIVACEUM	37	35	6	16
1HAARC	HANNAEA ARCUS	1	P		P
1MERCI	MERIDION CIRCULARE	1			

1NACRY	NAVICULA CRYPTOCEPHALA		4	2	2
1NAHEU	NAVICULA HEUFLERI				P
1NANOT	NAVICULA NOTHA	2	5	4	
1NAPEL	NAVICULA PELLICULOSA	2	3		1
1NAPYG	NAVICULA PYGMAEA		3		1
1NARAD	NAVICULA RADIOSA				P
1NASEA	NAVICULA SECRETA VAR. APICULATA	8	17	4	1
1NATRI	NAVICULA TRIPUNCTATA	2		5	P
1NAVIR	NAVICULA VIRIDULA	6	3	27	7
1NASPP	NAVICULA SP.	1			
1NIACI	NITZSCHIA ACICULARIS			1	
1NIAPI	NITZSCHIA APICULATA	2			
1NIDIS	NITZSCHIA DISSIPATA	3	2	1	P
1NIFON	NITZSCHIA FONTICOLA			5	5
1NIFRU	NITZSCHIA FRUSTULUM	12	4	18	5
1NIHOL	NITZSCHIA HOLSATICA	1			
1NIHUN	NITZSCHIA HUNGARICA			1	
1NILIN	NITZSCHIA LINEARIS	11		2	P
1NIPAL	NITZSCHIA PALEA	5	2	4	
1PIBOR	PINNULARIA BOREALIS				P
1PHCUR	RHOICOSPHENIA CURVATA	1	4	2	2
1PHGIV	RHOPALODIA GIBBA				1
1SUOVA	SURIRELLA OVATA	6		2	5
1SYMIN	SYNEDRA MINUSCULA				P
1SYULN	SYNEDRA ULNA	1		4	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2			1
4ANASP	ANABAENA SP.		1		P
4OSSPP	OSCILLATORIA SP.		P		
4PHSPP	PHORMIDIUM SP.	4		30	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

JUNE

PERIPHYTON BENCH SHEET

RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 061680
SAMPLE STATION DESCRIPTION - COPPAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	24	53	12	19
NUMBER OF CROPS	30	40	40	40
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS		3		
1ACLAN	ACHNANTHES LANCEOLATA	2	4	1	7
1ACMIN	ACHNANTHES MINUTISSIMA	100	100	145	4
1AMVEN	AMPHORA VENETA				2
1CYCME	CYCLOTELLA MENEGHINIANA			P	
1EPSUR	EPITHEMIA SOREX			P	
1FRAVA	FRAGILARIA VAUCHERIAE	41	34	44	101
1HANAM	HANTZSCHIA AMPHIOXYS	1			
1MERCI	MERIDION CIRCULARE			P	3
1NAARV	NAVICULA ARVENSIS		1	1	
1NAHAL	NAVICULA HALOPHILA	1			
1NAHEU	NAVICULA HEUFLERI	3	3	1	1
1NANOT	NAVICULA NOTHA	1			
1NAPEL	NAVICULA PELLICULOSA	P	P	4	3
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	13	3	11
1NIAPI	NITZSCHIA APICULATA	3			
1NIFAS	NITZSCHIA FASCICULATA		1		
1NIFON	NITZSCHIA FONTICOLA	7	2	123	22
1NIFRU	NITZSCHIA FRUSTULUM		32	1	1
1NIPAL	NITZSCHIA PALEA	3			
1EHMUS	EPIPALEDIA MUSCULUS		11	P	
1SUOVA	SURIRELLA OVATA	4		P	4
1SYSPP	SYNEDRA SP.			P	
2PALCH	PALMELLA STAGE OF CHAETOPHORACEAE		30		
4PHSPP	PHORMIDIUM SP.		P	P	

P - PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 061680

SAMPLE STATION DESCRIPTION - COPRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	18	17	22	20
NUMBER OF DROPS	20	20	20	15
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	P	5	65	10
1ACLAN	ACHNANTHES LANCEOLATA	29	12	10	4
1ACMIC	ACHNANTHES MICROCEPHALA	P	?		
1ACMIN	ACHNANTHES MINUTISSIMA	13	125		
1AMGVP	AMPHORA OVALIS	?	?		
1CAAMP	CALONEIS AMPHISBAENA	P	P	P	
1COCPL	COCCONEIS PLACENTULA	?	1	1	
1CYCME	CYCLOTELLA MENEGHINIANA		1		
1CYMCI	CYMBELLA CISTULA	P			
1CYMCN	CYMBELLA CYMBIFORMIS VAR. NONPUNCTATA		1		
1CYMMI	CYMBELLA MINUTA			P	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	2	P	2	
1DITEE	DIATOMA TENUE VAR. ELONGATUM		P	4	
1ENPAL	ENTOMONEIS PALUDOSA		P		
1FPACR	FRAGILARIA CROTONENSIS		P		P

1FRAVA	FRAGILARIA VAUCHERIAE	21		63	15
1GOANG	GOMPHONEMA ANGUSTATUM		P		1
1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM			P	
1MERCI	MERIDION CIRCULARE			4	3
1NAARV	NAVICULA ARVENSIS			1	
1NACRY	NAVICULA CRYPTOCEPHALA		P		1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		12	1	
1NACUS	NAVICULA CUSPIDATA				P
1NAHEU	NAVICULA HEUFLERI	8	1	2	1
1NAMIN	NAVICULA MINIMA	P	1	1	3
1NAPEL	NAVICULA PELLICULOSA		P		
1NASEA	NAVICULA SECRETA VAR. APICULATA	101	100	100	100
1NASIX	NAVICULA SIMPLEX	P	1		
1NAVIR	NAVICULA VIRIDULA		1	1	
1NIACI	NITZSCHIA ACICULARIS	1	1	1	4
1NIDEN	NITZSCHIA DENTICULA			1	
1NIFON	NITZSCHIA FONTICOLA	9			
1NIFRU	NITZSCHIA FRUSTULUM	5	4	12	14
1NIHUN	NITZSCHIA HUNGARICA				P
1NILIN	NITZSCHIA LINEARIS	1	1	4	1
1NIPAL	NITZSCHIA PALEA			2	2
1PINBE	PINNULARIA BREBISSONII		3	4	3
1PIMAI	PINNULARIA MAIOR	P			
1RHGIB	RHOPALODIA GIBBERULA		P		
1RHMUS	RHOPALODIA MUSCULUS		2		
1SUOVA	SURIRELLA OVATA			1	
1SYACU	SYNEDRA ACUS			4	P
1SYFAS	SYNEDRA FASCICULATA	P	13		
1SYMIN	SYNEDRA MINUSCULA	8	9	2	
1SYULN	SYNEDRA ULNA		P	2	
4PHSPP	PHORMIDIUM SP.				3

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 20
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 061680
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	6	7	7	7	10	11	22	11
NUMBER OF DROPS	30	25	25	20	15	20	50	20
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	50	50	50	50	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	P	7			139	5	53	
1ACHAU	ACHNATHES HAUCKIANA	P	1						
1ACHAP	ACHNATHES HAUCKIANA VAR. POSTRATA	P	7	2					
1ACLAN	ACHNANTHES LANCEOLATA		21	1	13		P		
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	P		P		33	104	6	63
1ACMIN	ACHNANTHES MINUTISSIMA	3			4				
1CYCME	CYCLOTELLA MENEGHINIANA	10	20	8	10	22	66	14	28
1CYMM	CYMBELLA MINUTA								1
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA			P	3	1	P		
1ENPAL	ENTOMONEIS PALUDOSA		1	P	P	P		1	1
1FRAVA	FRAGILARIA VAUCHERIAE	P	20	P		9	16	1	1
1GOPAR	GOMPHONEMA PARVULUM			P					
1NACIR	NAVICULA CINCTA VAR. POSTRATA						P		
1NACRY	NAVICULA CRYPTOCEPHALA			2					4
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P	P	P		P	P		
1NACUS	NAVICULA CUSPIDATA		P						
1NAFXI	NAVICULA EXIGUA					P			

1NAHAL	NAVICULA HALOPHILA	P		P		1		1	P
1NAHEU	NAVICULA HEUFLERI	1	P	P			P		1
1NAMIN	NAVICULA MINIMA								1
1NAPYG	NAVICULA PYGMAEA					P			
1NASAL	NAVICULA SALINARUM	1							
1NASEA	NAVICULA SECRETA VAR. APICULATA	2	5	6	2	1	1		P
1NASIM	NAVICULA SIMPLEX	1							
1NATRI	NAVICULA TRIPUNCTATA		P	P		P			
1NAVIR	NAVICULA VIRIDULA				1				
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	1							
1NIACI	NITZSCHIA ACICULARIS	P						P	
1NICOM	NITZSCHIA COMMUNIS	1							
1NIDEN	NITZSCHIA DENTICULA		P						
1NIFON	NITZSCHIA FONTICOLA	5		6	15	62			
1NIFRU	NITZSCHIA FRUSTULUM	4	5	10			21	1	15
1NIHUN	NITZSCHIA HUNGARICA	3	P	2	P	P	P		P
1NILAT	NITZSCHIA LATENS			4					
1NILIN	NITZSCHIA LINEARIS	1	P						
1NIPAL	NITZSCHIA PALEA			P					
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS				P	P			
1SULIN	SURIRELLA LINEARIS					P			
1SUOVL	SURIRELLA OVALIS	P	P	P	P	P			3
1SUOVA	SURIRELLA OVATA	5	7	7	7	5	18	2	4
1SYMIN	SYNEDRA MINUSCULA			1					
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA			P					
2CHAPR	PULMOCHAETA SP.	113	111	101	102	73	105	100	102
2CLASP	CLADOPHORA SP.	P							
2MOUSP	ROUGEOTIA SP.	P							
4PHSPP	PHORMIDIUM SP.	P	P	P	P			P	P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 061680
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	9	8	9	7	11	9	6	6
NUMBER OF DROPS	20	20	44	45	45	40	40	45
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	50	50	50	50	50	50	50	50

		NUMBER OBSERVED							
CODE	TAXON	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS		4		1	12	P	6	P
1ACLAN	ACHNANTHES LANCEOLATA				1		1		1
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	36	8	2		1	P	P	1
1ACMIN	ACHNANTHES MINUTISSIMA			6					
1COCPL	COCCONEIS PLACENTULA		P						
1CYCME	CYCLOTELLA MENEGHINIANA	19	20	53	28	44	64	38	35
1CYMMI	CYMBELLA MINUTA	1		P					
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA						P		
1ENPAL	ENTOMONEIS PALUDOSA		P	P			P	3	1
1EPSOR	EPITHEMIA SOREX					1			
1FRAVA	FRAGILARIA VAUCHERIAE	2	5	5	7	23	7	9	9
1GOANG	GOMPHONEMA ANGUSTATUM				P				
1GOINT	GOMPHONEMA INTRICATUM		P						
1GYSPE	GYROSIGMA SPENCERII				P	P	P		
1NACIR	NAVICULA CINCTA VAR. POSTRATA	P							
1NACRY	NAVICULA CRYPTOCEPHALA			3		1		P	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P	2			P	P	3	
1NACUS	NAVICULA CUSPIDATA		P						
1NAHAL	NAVICULA HALOPHILA	P		P	P		P	P	P
1NAMIN	NAVICULA PINIMA							P	
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	3	5	3	1	8	P	3
1NATRI	NAVICULA TRIPUNCTATA							P	
1NAVIR	NAVICULA VIRIDULA		P		2	2	P	P	1
1NIACI	NITZSCHIA ACICULARIS				1				
1NICOM	NITZSCHIA COMMUNIS								P

1NIDEN	NITZSCHIA DENTICULA					2			
1NIDIS	NITZSCHIA DISSIPATA						1		
1NIFON	NITZSCHIA FONTICOLA			15		2		P	21
1NIFRU	NITZSCHIA FRUSTULUM	41	24				11	3	9
1NIHOL	NITZSCHIA HOLSATICA					P			P
1NIHUN	NITZSCHIA HUNGARICA	5				P			
1NILAT	NITZSCHIA LATENS								P
1NILIN	NITZSCHIA LINEARIS		P			P			P
1NIMIC	NITZSCHIA MICROCEPHALA		P						
1NIPAL	NITZSCHIA PALEA		1			P	1	3	4
1NIROM	NITZSCHIA ROMANA						1		
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS		P				P	1	P
1NISPP	NITZSCHIA SP.							P	1
1PIBRE	PINNULARIA BREBISSONII						1	P	
1SULIN	SURIRELLA LINEARIS				P		1		P
1SUOVL	SURIRELLA OVALIS	2	P		P		P	1	P
1SUOVA	SURIRELLA OVATA	18	18	12	12	5	9	P	12
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA					1		P	
2CHAPR	PULAROCHAETA SP.	101	102	100	125	103	112	110	106
2CLASP	CLADOPHORA SP.	P		P					
2STTE	STIGEOCLONIUM TENUE						P		P
2ULSPP	ULOTHRIX								P
4PHSPP	PHORMIDIUM SP.	P	P	P	P	P	P	P	P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

JULY

PERIPHYTON BENCH SHEET

RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072180
SAMPLE STATION DESCRIPTION - COPRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	15	17	11	14
NUMBER OF DROPS	20	20	20	20
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	52	100	100	100
1ACLAN	ACHNANTHES LANCEOLATA	1		3	P
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA			1	
1ACMIN	ACHNANTHES MINUTISSIMA	P	P	P	
1AMOVF	AMPHORA OVALIS VAR. AFFINIS	P	P	2	P
1CAAMP	CALONEIS AMPHISBAENA			5	
1COCPL	COCCONEIS PLACENTULA			P	
1CYCME	CYCLOTELLA MENEGHINIANA		1	6	P
1CYMCI	CYMBELLA CISTULA	P		1	P
1CYMMI	CYMBELLA MINUTA	5	22	7	3
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P		1	P
1DEELE	DENTICULA ELEGANS			6	
1DITEE	DIATOMA TENUE VAR. ELONGATUM			P	
1FRACA	FRAGILARIA CAPUCINA		P	5	P
1FRACR	FRAGILARIA CROTONENSIS			29	
1FRAVA	FRAGILARIA VAUCHERIAE	52	36	29	3
1GOPAP	GOMPHONEMA PARVULUM	P		1	P
1GYSPE	GYROSIGMA SPENCERII		1	P	P
1MELVA	MELOSIRA VARIANS	5			P
1MESCI	PERIDICT CIRCULARE	4	2	P	P
1NAARV	NAVICULA ARVENSIS	1			P
1NAAUR	NAVICULA AURICULATA			P	
1NACUS	NAVICULA CUSPIDATA			P	
1NAHAL	NAVICULA HALOPHILA	P	1	8	P
1NAHEU	NAVICULA HEUFLERI		1	4	P
1NAPEL	NAVICULA PELLICULOSA		1	P	
1NASEA	NAVICULA SECRETA VAR. APICULATA	2	3	25	P
1NAVIP	NAVICULA VIRIDULA	P		P	P
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA		2	P	1
1NIACI	NITZSCHIA ACICULARIS	1			P
1NIAPI	NITZSCHIA APICULATA		1	2	
1NIBUL	NITZSCHIA BULNHEIMIANA	P			P
1NIDEN	NITZSCHIA DENTICULA	1	1	P	P
1NIFON	NITZSCHIA FONTICOLA	P			
1NIFRU	NITZSCHIA FRUSTULUM		1	1	2
1NILIN	NITZSCHIA LINEARIS	2	3	P	P

1PIBRE	PINNULARIA BREBISSONII			1	
1PISPP	PINNULARIA SP.		P	1	
1SUOVL	SURIRELLA OVALIS	P	P	3	1
1SUOVA	SURIRELLA OVATA	P	4	P	P
1SYACU	SYNEDRA ACUS			2	
1SYFAS	SYNEDRA FASCICULATA	P	P	1	
1SYMIN	SYNEDRA MINUSCULA			5	
1SYULN	SYNEDRA ULNA	P	1	P	P
1SYSPP	SYNEDRA SP.			33	2
1THSPP	THALASSIOSIRA FLUVIATILIS			P	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		6	6	
2CLASP	CLADOPHORA SP.	100	78	P	P
2DRAPA	DRAPARNALDIA SP.		P	P	

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072180
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	13	23	21	9
NUMBER OF DROPS	70	6	18	22
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	104		60	15
1ACLAN	ACHNANTHES LANCEOLATA	1	5		5
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA			23	2
1ACMIC	ACHNANTHES MICROCEPHALA			R	
1ACMIN	ACHNANTHES MINUTISSIMA		47	100	40
1AMOVP	AMPHORA OVALIS		P		
1AMOVF	AMPHORA OVALIS VAR. AFFINIS	P		P	P
1CAAMP	CALONEIS AMPHISBAENA	P	P	1	P
1COCPE	COCCONEIS PEDICULUS		1	3	
1COCPL	COCCONEIS PLACENTULA	P	1	P	P
1CYCME	CYCLOTELLA MENEGHINIANA	P	9	14	3
1CYMCI	CYMBELLA CISTULA			P	
1CYMCN	CYMBELLA CYMBIFORMIS VAR. NONPUNCTATA	P			1
1CYMMI	CYMBELLA MINUTA	13			4
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		18	4	
1CYMSI	CYMBELLA SINUATA		1		
1DEELE	DENTICULA ELEGANS		1	P	1
1DITEE	DIATOMA TENUE VAR. ELONGATUM	P	10	34	14
1DIVUL	DIATOMA VULGARE		10		
1ENPAL	ENTOMONEIS PALUDOSA				P
1EPSOR	EPITHEMIA SOREX		17		
1FRACA	FRAGILARIA CAPUCINA			14	4

1FRACR	FRAGILARIA CROTONENSIS	P	57	102	60
1FRAVA	FRAGILARIA VAUCHERIAE	48	100	34	12
1GOGRA	GOMPHONEMA GRACILE			1	
1GOPAR	GOMPHONEMA PARVULUM	1	1	1	
1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM		P		
1GYSPE	GYROSIGMA SPENCERII	1	1		
1HANAM	HANTZSCHIA AMPHIOXYS				1
1MERCI	MERIDION CIRCULARE	P			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		1		
1NACUS	NAVICULA CUSPIDATA	P		1	P
1NAEXI	NAVICULA EXIGUA		1		
1NAHAL	NAVICULA HALOPHILA	3	4	31	
1NAHEU	NAVICULA HEUFLERI		4	13	5
1NAMIN	NAVICULA MINIMA		1		
1NASEA	NAVICULA SECRETA VAR. APICULATA	3	30	74	100
1NAVIR	NAVICULA VIRIDULA		1		
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA			P	
1NIACI	NITZSCHIA ACICULARIS	2	1	5	
1NICOM	NITZSCHIA COMMUNIS			1	
1NIFRU	NITZSCHIA FRUSTULUM	2	16	13	3
1NIHUN	NITZSCHIA HUNGARICA			1	
1NILIN	NITZSCHIA LINEARIS	2	3	6	6
1NIPAL	NITZSCHIA PALEA	1	P		1
1PIBRE	PINNULARIA BREBISSONII			P	
1PIMAI	PINNULARIA MAIOR		P	P	P
1PISPP	PINNULARIA SP.		P		
1RHCUR	RHOICOSPHENIA CURVATA		10	P	
1RHGIV	RHOPALODIA GIBBA	P	P		
1RHGIB	RHOPALODIA GIBBERULA	1			
1SULIN	SURIRELLA LINEARIS				P
1SUOVL	SURIRELLA OVALIS	1	P	P	P
1SUOVA	SURIRELLA OVATA	6		P	P
1SYACU	SYNEDRA ACUS	3	5	24	P
1SYFAS	SYNEDRA FASCICULATA	6	14	23	3
1SYMIN	SYNEDRA MINUSCULA		4	11	4
1SYULO	SYNEDRA ULNA VAR. OXYRHYNCHUS				P
1THSPP	THALASSIOSIRA FLUVIATILIS		4	11	10
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	P	12		
2CHASP	CHAETOCERA SP.		P		
2CLASP	CLADOPHORA SP.			P	
2MICSP	MICROSPORA SP.	7			
2SCEQU	SCENEDESMUS QUADRICAUDA		P		
2STITE	STIGEOCLONIUM TENUE		3		
3VAUSP	VAUCHERIA SP.	16			
4ANASP	ANABAENA SP.			P	
4OSCSP	OSCILLATORIA SP.	P	P		
4PHMSP	PHORMIDIUM SP.		2		P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 2C
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072180
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	30	7	10	7	18	18	15	6
NUMBER OF DROPS	31	21	20	3	3	20	20	21
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	45	45	45	45	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	36	100	34	21	66	103	100	33
1ACLAN	ACHNANTHES LANCEOLATA					1			
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	2					1	3	6
1ACSPP	ACHNATHES SP.			5		2			
1AMOVP	AMPHORA OVALIS	1	P					1	P
1ASFOR	ASTERIONELLA FORMOSA			P					
1CAAMP	CALONEIS AMPHISBAENA	P							
1CYCME	CYCLOTELLA MENEGHINIANA	23	13	40	12	36	28	70	23
1CYMMI	CYMBELLA MINUTA						2		
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P							
1ENPAL	ENTOMONEIS PALUDOSA	P		1	P	1		1	P
1EPSOR	EPITHEMIA SOREX	1	P						
1FRAVA	FRAGILARIA VAUCHERIAE			20					
1GOGPA	GOMPHONEMA GRACILE	1	3	4	P	1	3	2	2

1GOPAR	GOMPHONEMA PARVULUM	P	P			1			P
1GYSPE	GYROSIGMA SPENCERII		P						P
1HANAM	HANTZSCHIA AMPHIOXYS		P						
1NACIR	NAVICULA CINCTA VAR. ROSTRATA	1	P						
1NACPV	NAVICULA CRYPTOCEPHALA VAR. VENETA					2		1	P
1NACUS	NAVICULA CUSPIDATA	1			P				
1NAHAL	NAVICULA HALOPHILA		P	1	P		2		
1NAPUT	NAVICULA PUTICA				P				
1NASAL	NAVICULA SALINARUM				3				
1NASEA	NAVICULA SECRETA VAR. APICULATA						1	5	2
1NAVIR	NAVICULA VIRIDULA			4				P	
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	1			P		1		P
1NIAPI	NITZSCHIA APICULATA	1	P		P	P			P
1NIDEN	NITZSCHIA DENTICULA				2				
1NIFRU	NITZSCHIA FRUSTULUM		1				6	4	2
1NIHUN	NITZSCHIA HUNGARICA		P						
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	1							
1PIBOR	PINNULARIA BOREALIS		P						
1RHCUR	RHOICOSPHENIA CURVATA		P						
1SULIN	SURIRELLA LINEARIS	P	P	P	P			P	
1SUOVL	SURIRELLA OVALIS	1	1	2	P	P	1	2	1
1SUOVA	SURIRELLA OVATA	1	P			P			1
1SYPLL	SYNEDRA PULCHELLA VAR. LANCEOLATA	70	7	31	4	34	38	39	32
2CHAPR	PULMOCHAETA SP.	100	20	100	105	40		6	100
2CLASP	CLADOPHORA SP.	17		40	P	103	45	4	
2RHSPP	RHIZOCLONIUM SP.					P			
4ANASP	ANABAENA SP.			P	P				
4OSSPP	OSCILLATORIA SP.	P	P		P			P	
4PHSPP	PHORMIDIUM SP.			P					P
4MESPP	PERISMOPEDIA SP.			P					

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072180
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	7	12	11	6	9	8	6	12
NUMBER OF DROPS	20	5	5	4	5	20	20	20
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	45	45	45	45	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	21	20	22	100	17	30	10	21
1ACLAN	ACHNANTHES LANCEOLATA					2			
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	3	3		P		P		1
1ACLIN	ACHNANTHES LINEARIS		1						
1ACSPP	ACHNATHES SP.	P							
1AMOVP	AMPHORA OVALIS	P	P				P		
1AMPEP	AMPHORA PERPUSILLA						1		
1COCPL	COCCONEIS PLACENTULA								P
1CYCME	CYCLOTELLA MENEGHINIANA	42	48	25	18	21	30	21	43
1CYMAF	CYMBELLA AFFINIS		P						
1CYMMI	CYMBELLA MINUTA						P		
1DIVUL	DIATOMA VULGARE	P						P	
1ENPAL	ENTOMONEIS PALUDOSA		1		P			1	
1EPSOR	EPITHEMIA SOREX								P
1FRACO	FRAGILARIA CONSTRUENS								P
1FRAVA	FRAGILARIA VAUCHERIAE					3	F		
1GOANG	GOMPHONEMA ANGUSTATUM								P
1GOGRA	GOMPHONEMA GRACILE	2	P	1	P	1	P	2	1
1GOPAR	GOMPHONEMA PARVULUM	1			1		F	1	P
1GYSPE	GYROSIGMA SPENCERII	P					P		

1MAELL	MASTOGLOIA ELLIPTICA	P							
1MAGRE	MASTOGLOIA GREVILLEI					P			
1MACIR	NAVICULA CINCTA VAR. ROSTRATA					1		1	1
1MACRY	NAVICULA CRYPTOCEPHALA VAR. VENETA		1		1				
1MACUS	NAVICULA CUSPIDATA	P	P	P	P		P	P	
1MAHAL	NAVICULA HALOPHILA							P	
1MAHEU	NAVICULA HEUFLERI			?					
1MARAD	NAVICULA RADIOSA								1
1MASAL	NAVICULA SALINARUM					1		1	
1MASEA	NAVICULA SECRETA VAR. APICULATA	P	1				P	P	
1MAVIA	NAVICULA VIRIDULA VAR. AVENACEA	P	P			P		1	1
1NIAPI	NITZSCHIA APICULATA	1					P		1
1NIFRU	NITZSCHIA FRUSTULUM		2	1	P			1	1
1NIHUN	NITZSCHIA HUNGARICA				P				
1NIROM	NITZSCHIA ROMANA							P	
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			?					
1RHCUR	RHOICOSPHENIA CURVATA		P						
1SULIN	SURIRELLA LINEARIS	P							
1SUOVL	SURIRELLA OVALIS	1	1	1	P	P	P	P	P
1SUOVA	SURIRELLA OVATA		P	P	P	P	1		3
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA	30	29	79	8		C	6	79
2ANKSP	ANKISTRODESMUS SP.					P			
2CHAPR	PLEUROCHAETA SP.	104	103	126	111	101	11C	1C4	1C4
2CLASP	CLADOPHORA SP.	7	19	20	P			5	34
2MOUSP	MOUGEOTIA SP.					P			
4ANASP	ANABAENA SP.			P					
4PHSPP	PHORMIDIUM SP.					P			P
4MESPP	PERISMOPEDIA SP.				P	P			

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 27
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072280
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	9	23	27	20
NUMBER OF DROPS	5	3	6	6
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA				1
1ACMIN	ACHNANTHES MINUTISSIMA	14	4	6	4
1AMPEL	AMPHIPLEURA PELLUCIDA				1
1AMPER	AMPHORA PERPUSILLA	5		7	P
1COCPE	COCCONEIS PEDICULUS	P	1		
1COCPL	COCCONEIS PLACENTULA	2	6	13	10
1CYCME	CYCLOTELLA MENEGHINIANA		P		
1CYDSO	CYMATOPLEURA SOLEA	P		P	
1CYMMI	CYMBELLA MINUTA	3			
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	5	8	3	7
1CYMSI	CYMBELLA SINUATA			4	
1DIHIM	DIATOMA HIEMALE VAR. MESODON			1	
1DITEE	DIATOMA TENUE VAR. ELONGATUM				P
1DIVUL	DIATOMA VULGARE	13	11	17	100
1ENORN	ENTOMONEIS ORNATA	P			
1EPSOP	EPITHEMIA SOREX	70	100	100	44
1FRAVA	FRAGILARIA VAUCHERIAE	4	1	3	4
1GOANG	GOMPHONEMA ANGUSTATUM			3	
1GOINP	GOMPHONEMA INTRICATUM VAR. PUMILA		1		
1GOOLI	GOMPHONEMA OLIVACEUM	8			
1HABPC	HANNAEA ARCUS				2
1MELVA	MELOSIRA VARIANS	1			8
1NACRY	NAVICULA CRYPTOCEPHALA		6	1	
1NACPV	NAVICULA CRYPTOCEPHALA VAR. VENETA	6		P	4
1NACUS	NAVICULA CUSPIDATA	P			
1NAHEU	NAVICULA HEUFLERI		1	6	
1NALAN	NAVICULA LANCEOLATA	1	5		1
1NALUZ	NAVICULA LUZONENSIS		1		
1NAMIN	NAVICULA MINIMA	1			
1NANOT	NAVICULA NOTHA				3

1NARAP	NAVICULA RADIOSA VAR. PARVA	P			5
1NARHY	NAVICULA RHYNCHOCEPHALA	2			
1NASEA	NAVICULA SECRETA VAR. APICULATA			3	4
1NATPI	NAVICULA TRIPUNCTATA	2			
1NAVIR	NAVICULA VIRIDULA		33	10	3
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	13			
1NIDEN	NITZSCHIA DENTICULA				1
1NIDIS	NITZSCHIA DISSIPATA	2	5	4	1
1NIFRU	NITZSCHIA FRUSTULUM	6	4	9	5
1NIHOL	NITZSCHIA HOLSATICA		P	4	P
1NIHUN	NITZSCHIA HUNGARICA				P
1NILIN	NITZSCHIA LINEARIS	1			
1NIPAL	NITZSCHIA PALEA		2		P
1NISIE	NITZSCHIA SIGMOIDEA		P		
1PHCUR	PHOICOSPHENIA CURVATA	15	14	30	17
1PHGIV	PHOPALODIA GIBBA	P	P		P
1PHMUS	PHOPALODIA MUSCULUS				1
1SUOVL	SURIRELLA OVALIS		P		1
1SUOVA	SURIRELLA OVATA	P			1
1SYFAS	SYNEDRA FASCICULATA				2
1SYULN	SYNEDRA ULNA	3	7	4	3
1SYULC	SYNEDRA ULNA VAR. CONSTRICTA	1			P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS		14		
2CLAGL	CLADOPHORA GLOMERATA	100	63	40	75
2STITE	STIGEOCLONIUM TENUE				P
4ANASP	ANABAENA SP.		P	P	1
4CHAMI	CHAMAESIPHON INCRUSTANS	P			P
4HAPSP	HAPALOSIPHON SP.		P		
4OSSPP	OSCILLATORIA SP.	P	P		P
4PHSPP	PHORMIDIUM SP.	1	P		2
5EUSPP	EUGLENA SP.				P
6ADVIO	AUDOUINELLA VIOLACEA	20			

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 29
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 072280
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DLEFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	10	13	10	19
NUMBER OF DROPS	6	5	5	4
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	45	45	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES MINUTISSIMA	11	43	5	1
1AMPER	AMPHORA PERPUSILLA	4	8	2	
1COCPE	COCCONEIS PEDICULUS		P	P	
1COCPL	COCCONEIS PLACENTULA	2	3	1	2
1CYCME	CYCLOTELLA MENEGHINIANA	12	1	P	
1CYMMI	CYMBELLA MINUTA	1		3	13
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA		8		12
1CYMSI	CYMBELLA SINUATA	P	1		
1DEELE	DENTICULA ELEGANS	P			
1DITEN	DIATOMA TENUE		P		
1DIVUL	DIATOMA VULGARE	13	4	6	19
1EPSOR	EPITHEMIA SOREX	53	5	114	106
1EPTUR	EPITHEMIA TURGIDA			P	
1FRAVA	FRAGILARIA VAUCHERIAE	P	P	1	
1GOANG	GOMPHONEMA ANGUSTATUM			P	
1GOINT	GOMPHONEMA INTRICATUM			1	
1GOOLI	GOMPHONEMA OLIVACEUM	4	18	P	
1GOPAR	GOMPHONEMA PARVULUM		6	2	
1NACRY	NAVICULA CRYPTOCEPHALA			3	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	4	1		
1NAGRA	NAVICULA GRACILOIDES	1			
1NAHEU	NAVICULA HEUFLERI			2	
1NALAN	NAVICULA LANCEOLATA			2	

1NALUZ	NAVICULA LUZONENSIS		1	1	
1NAMIN	NAVICULA MINIMA	1	3		
1NANOT	NAVICULA NOTHA	2			
1NARAP	NAVICULA RADIOSA VAR. PARVA			1	
1NARHY	NAVICULA RHYNCHOCEPHALA	2			
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	2	P	
1NATRI	NAVICULA TRIPUNCTATA	1	1		1
1NAVIR	NAVICULA VIRIDULA	5			
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA		11	2	6
1NAVIL	NAVICULA VIRIDULA VAR. LINEARIS	P			
1NIDIS	NITZSCHIA DISSIPATA	4	14	3	
1NIFRU	NITZSCHIA FRUSTULUM	2	72	14	3
1NIHUN	NITZSCHIA HUNGARICA		P	1	
1NILIN	NITZSCHIA LINEARIS	1			
1NIPAL	NITZSCHIA PALEA		P	P	
1NITPL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS	P			
1PHCUR	PHOTOSPHENIA CURVATA	20	5	6	2
1PHGIV	PHOPALODIA GIBBA			4	
1SUOVA	SURIRELLA OVATA		P		
1SYACU	SYNEDRA ACUS	P	P		3
1SYULN	SYNEDRA ULNA	6	P	P	
1SYULC	SYNEDRA ULNA VAR. CONSTRICTA		4		
2CLAGL	CLADOPHORA GLOMERATA	104	26	36	
2STITE	STIGEOCLONIUM TENUE		107	P	P
4ANASP	ANABAENA SP.			P	
4OSSPP	OSCILLATORIA SP.		4	P	
4PHSPP	PHORMIDIUM SP.	5		P	10
6ADVIO	AUDOUINELLA VIOLACEA	16	P	33	56

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

AUGUST

PERIPHYTON BENCH SHEET

RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081880
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	25	29	16	9
NUMBER OF DROPS	15	15	16	13
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	100	103	101	105
1ACLAN	ACHNANTHES LANCEOLATA	3	6	5	1
1ACSPP	ACHNATHES SP.	1			
1AMOVP	AMPHORA OVALIS	P		P	
1COCPL	COCCONEIS PLACENTULA	1			
1CYCME	CYCLOTELLA MENEGHINIANA		1		
1CYMMI	CYMBELLA MINUTA	3	7	22	23
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	4	1		P
1DIVUL	DIATOMA VULGARE		1		
1DISPP	DIATOMA SP.				P
1EPSOR	EPITHEMIA SOREX		11		P
1EUNPS	EUNOTIA PECTINALIS				P
1FRAVA	FRAGILARIA VAUCHERIAE	1		2	4
1GOPAR	GOMPHONEMA PARVULUM				P

1GYSPE	GYROSIGMA SPENCERII			1	P
1HANAM	HANTZSCHIA AMPHIOXYS	1		P	
1MERCI	MERIDION CIRCULARE				P
1NAAUR	NAVICULA AURICULATA	3		2	
1NACRY	NAVICULA CRYPTOCEPHALA			P	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1			
1NAFLG	NAVICULA FLGINENSIS	1			
1NAHAL	NAVICULA HALOPHILA	12	9	8	5
1NAHEU	NAVICULA HEUFLERI	P	1		P
1NAPEL	NAVICULA PELLICULOSA	2	2		
1NAPYG	NAVICULA PYGMAEA	1			
1NASEA	NAVICULA SECRETA VAR. APICULATA	3		1	1
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	P	2	1	2
1NIACI	NITZSCHIA ACICULARIS				1
1NIAPI	NITZSCHIA APICULATA	P			
1NIDEN	NITZSCHIA DENTICULA				1
1NIEPI	NITZSCHIA EPITHEMOIDES			1	
1NIFRU	NITZSCHIA FRUSTULUM	13	3	3	5
1NILIN	NITZSCHIA LINEARIS	2			P
1NIPAL	NITZSCHIA PALEA			P	1
1NISPP	NITZSCHIA SP.				3
1SUOVL	SURIRELLA OVALIS		1		P
1SUOVA	SURIRELLA OVATA	1		1	1
2CHRSP	CHARA SP.				P
2CLASP	CLADOPHORA SP.		10	11	23
2MICSP	MICROSPORA SP.				10
2SPISP	SPIROGYRA SP.				14
2ZYGSP	ZYGNEMA SP.				4

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081880
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	9	8	5	11
NUMBER OF DROPS	13	5	15	5
COVERSLIP AREA	625	625	625	625
DROPS/ML	50	50	50	50

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS	6	12	6	7
1ACLAN	ACHNANTHES LANCEOLATA		3	4	19
1ACLAO	ACHNANTHES LANCEOLATA VAR. DUBIA	2			
1ACMIC	ACHNANTHES MICROCEPHALA	2	4	P	3
1ACMIN	ACHNANTHES MINUTISSIMA	104	105	100	103
1AMOVP	AMPHORA OVALIS	P	2	P	P
1CAAMP	CALONEIS AMPHISBAENA		P		
1COCPE	COCCONEIS PEDICULUS	1			
1COCPL	COCCONEIS PLACENTULA	6	2	P	5
1CYCME	CYCLOTELLA MENEGHINIANA	49	10	3	46
1CYMCI	CYMBELLA CISTULA	P		P	1
1CYMCN	CYMBELLA CYMBIFORMIS VAR. NONPUNCTATA	1	P	2	
1CYMMI	CYMBELLA MINUTA	1	1	3	1
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	3	1	P	
1CYMSI	CYMBELLA SINUATA	1			
1DEELE	DENTICULA ELEGANS	1			P
1DITEE	DIATOMA TENUE VAR. ELONGATUM	P	P	4	6
1ENPAL	ENTOMONEIS PALUDOSA	P	P		
1FRACA	FRAGILARIA CAPUCINA	P	P		14
1FRACR	FRAGILARIA CROTONENSIS	10	14	6	6
1FRAVA	FRAGILARIA VAUCHERIAE	23	10	5	12
1GOANG	GOMPHONEMA ANGUSTATUM	P		P	1
1GOPAR	GOMPHONEMA PARVULUM			P	

1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM		P		
1GYSPE	GYROSIGMA SPENCERII		P		
1NACRY	NAVICULA CRYPTOCEPHALA		1		2
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P	2	P	3
1NACUS	NAVICULA CUSPIDATA	P	P		
1NAELG	NAVICULA ELGINENSIS		1		
1NAHEU	NAVICULA HEUFLERI	2	P		
1NAMIN	NAVICULA MINIMA		1		
1NANOT	NAVICULA NOTHA	2	2	1	
1NAPEL	NAVICULA PELLICULOSA				1
1NASEA	NAVICULA SECRETA VAR. APICULATA	24	11	6	27
1NASIX	NAVICULA SIMPLEX	P			
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	1	P	P	
1NIFRU	NITZSCHIA FRUSTULUM	11	7	6	10
1NILIN	NITZSCHIA LINEARIS	1	2	1	4
1PIBPE	PINNULARIA BREBISSONII	P			
1PIMAI	PINNULARIA MAIOR	P	P	P	P
1PHCUR	PHOTOSPHENIA CURVATA	P			
1SUOVL	SURIRELLA OVALIS	P	P		P
1SUOVA	SURIRELLA OVATA	P	P		1
1SYACU	SYNEDRA ACUS	2	P	2	1
1SYFAS	SYNEDRA FASCICULATA	P	4	9	10
1SYMIN	SYNEDRA MINUSCULA	P	4	P	2
1SYULN	SYNEDRA ULNA			P	
1THSPP	THALASSIOSIRA FLUVIATILIS	9	6	4	15
2CHAPP	RHIZOCHAETA SP.				P
2CLASP	CLADOPHORA SP.				P
2SCESP	SCENEDESMUS SP.		P		
2SPISP	SPIROGYRA SP.				P
4MESPP	PERISMOPEDIA SP.		P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 2C
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081080
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	7	5	5	5	5	5	5	5
NUMBER OF CROPS	11	19	15	22	21	12	25	20
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	50	50	50	50	50	50	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	112	213	132	102	120	103	170	141
1ACLAN	ACHNANTHES LANCEOLATA							P	
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA					1		P	
1ACSPP	ACHNANTHES SP.				1				
1AMCOF	AMPHORA COFFEIFORMIS					1		P	
1AMOVP	AMPHORA OVALIS								P
1AMPER	AMPHORA PERPUSILLA				1	P		P	P
1COCPL	COCCONEIS PLACENTULA					P			
1CYCME	CYCLOTELLA MENEGHINIANA	P	P	1	5	1	P	11	2
1CYMAF	CYMBELLA AFFINIS	P	1			P			
1CYMCI	CYMBELLA CISTULA		P				P		
1CYMMI	CYMBELLA MINUTA		4					P	P

1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P				2		P	P	
1EMPAL	ENTOMONEIS PALUDOSA	P								
1EPSOR	EPITHEMIA SOREX					P				
1FRACR	FRAGILARIA CROTONENSIS							P		
1FRAVA	FRAGILARIA VAUCHERIAE	1						P	1	
1GOANG	GOMPHONEMA ANGUSTATUM		1		2			P		
1GOGRA	GOMPHONEMA GRACILE	1	P	1	1	1		P	2	
1GOINT	GOMPHONEMA INTRICATUM					1				
1GOPAR	GOMPHONEMA PARVULUM				1					
1GYSPE	GYROSIGMA SPENCERII			P						
1MAELL	MASTOGLOIA ELLIPTICA	P								
1NACIP	NAVICULA CINCTA VAR. POSTRATA			1	P	P		P		
1NACPY	NAVICULA CRYPTOCEPHALA		1			1	P			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		1					1	1	
1NAHAL	NAVICULA HALOPHILA		P		1	3		1	3	
1NAHEU	NAVICULA HEUFLERI					P				
1NANOT	NAVICULA NOTHA					P				
1NASAL	NAVICULA SALINARUM		P				4			
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA		P	P	P	P	P	P	P	
1NIAPI	NITZSCHIA APICULATA	P	P		P				P	
1NIDEN	NITZSCHIA DENTICULA							P		
1NIFRU	NITZSCHIA FRUSTULUM	P	1	1		3		2	P	
1NILIN	NITZSCHIA LINEARIS				2			1		
1NIMIC	NITZSCHIA MICROCEPHALA								P	
1NIPAL	NITZSCHIA PALEA							P		
1NIROM	NITZSCHIA ROMANA	P								
1NITPL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS							1	P	
1NISPP	NITZSCHIA SP.							1	P	
1PIBPE	PINNULARIA BPERISSONII							P		
1RHMUS	RHOPALODIA MUSCULUS				P					
1SUOVL	SURIRELLA OVALIS	P	1			P		P	1	
1SUOVA	SURIRELLA OVATA					P				
1SYFAS	SYNEDRA FASCICULATA				P			1		
1SYMIN	SYNEDRA MINUSCULA	1						P		
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA		5	P	1	4	1	4	10	
1THSPP	THALASSIOSIRA FLUVIATILIS					P		P	P	
2CHAPP	BULBOCHAETA SP.	79	42	A	3	43		3	31	
2CLASP	CLADOPHORA SP.	P	40	P	25	P	3	41	1P	
2GLOSP	GLOEOCYSTIS SP.	P								
2GLOVE	GLOEOCYSTOIS VESICULOSA					P				
2SCEQU	SCENEDESMUS QUADRICAUDA				P					
2SPISP	SPIROGYRA SP.								P	
4ANASP	ANABAENA SP.				P					
4PHSPP	PHORMIDIUM SP.	P			P	P				
4MESPP	PERISMOPEDIA SP.		P							

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 500C MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - C81000
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	7	5	8	10	9	5	9	5
NUMBER OF DROPS	17	19	18	25	18	25	15	20
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	45	45	45	45	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	54	122	114	111	101	170	100	113
1ACLAN	ACHNANTHES LANCEOLATA			1	2				
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	P	1	2		2	P	P	
1AMCOF	AMPHORA COFFEIFORMIS	P				P	P	P	
1AMOVP	AMPHORA OVALIS	P		1	P		P	P	
1AMPER	AMPHORA PERPUSILLA	2	P	4	P		P	1	
1AMVEN	AMPHORA VENETA					P			
1CYCME	CYCLOTELLA MENEGHINIANA	3	5	P	1	4	2	7	2
1CYMAF	CYMBELLA AFFINIS	1	1						P
1CYMCI	CYMBELLA CISTULA							1	
1CYMPI	CYMBELLA MINUTA	P	1	P		P	1	2	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA			1	P	P			P
1DIVUL	DIATOMA VULGARE								P
1EPSOR	EPITHEMIA SOREX		P				P		1
1FRACO	FRAGILARIA CONSTRUENS								1
1FRAPI	FRAGILARIA PINNATA								P
1GOACU	GOMPHONEMA ACUMINATUM			P					
1GOANG	GOMPHONEMA ANGUSTATUM		1					1	
1GOGRA	GOMPHONEMA GRACILE	P	1	1	P	P	P		P
1GOINT	GOMPHONEMA INTRICATUM					P	P		P
1GOOLI	GOMPHONEMA OLIVACEUM						1		

1GOPAR	GOMPHONEMA PARVULUM				P				
1GYSPE	GYROSIGMA SPENCERII				P			P	
1NACIP	NAVICULA CINCTA VAR. POSTRATA	1	P	P	P	P		1	1
1NACRY	NAVICULA CRYPTOCEPHALA								P
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	2	2	1	3	1			1
1NAHAL	NAVICULA HALOPHILA			P	1	1	P	5	
1NAMIN	NAVICULA MINIMA			P					
1NANOT	NAVICULA NOTHA				P		P		1
1NASAL	NAVICULA SALINARUM	P				1			
1NASEA	NAVICULA SECRETA VAR. APICULATA			P			P		
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA			P				P	
1NIAPI	NITZSCHIA APICULATA	P	P	1			P		
1NIFRU	NITZSCHIA FRUSTULUM				P		1		1
1NILIN	NITZSCHIA LINEARIS								P
1NIMIC	NITZSCHIA MICROCEPHALA		P						
1NISPP	NITZSCHIA SP.	1				P		1	P
1PIBRE	PINNULARIA BREBISSONII			1					
1PHMUS	PHOPALODIA MUSCULUS				1				
1SUOVL	SURIRELLA OVALIS	P	P	P	1	P		P	
1SUOVA	SURIRELLA OVATA				1		P	1	
1SUSPI	SURIRELLA SPIRALIS		P						
1SYFAS	SYNEDRA FASCICULATA		P				P		
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA	2	15	7		1	1	14	P
1THSPP	THALASSIOSIRA FLUVIATILIS						P		
2CHAPR	RULROCHAETA SP.	100	3	89	106	66	22	65	20
2CLASP	CLADOPHORA SP.	6	43	15	P		10	P	13
2CLOSP	CLOSTERIUM SP.						P		
2STAUR	STAURASTRUM SP.	P							
4ANASP	ANABAENA SP.				1				
4CHAMI	CHAMAESIPHON INCRUSTANS	P	P	P	P		P	P	P
4OSSPP	OSCILLATORIA SP.				P		P		
4PHSPP	PHORMIDIUM SP.				P				
4ENRIV	ENTOPHYSALIS RIVULARIS							P	
4MESPP	PERISMOPEDIA SP.				P		P		
9PHASE	PHACUS SP.				P				

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 27
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081880
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 179

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	21	18	14	9
NUMBER OF DROPS	4	4	4	8
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	50	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACAFF	ACHNANTHES AFFINIS		1		
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA			3	
1ACMIN	ACHNANTHES MINUTISSIMA	12	P	25	103
1AMOVP	AMPHORA OVALIS		P		
1AMPER	AMPHORA PERPUSILLA		1		
1AMVEN	AMPHORA VENETA		3		
1CAAMP	CALONEIS AMPHISBAENA		P	P	
1COCPE	COCCONEIS PEDICULUS	2	P	P	P
1COCPL	COCCONEIS PLACENTULA	1	1	6	5
1CYCME	CYCLOTELLA MENEGHINIANA		P		2
1CYDSO	CYMATOPLEURA SOLEA			P	P
1CYMMI	CYMBELLA MINUTA	2	2		
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	3		P	42
1CYMSI	CYMBELLA SINUATA	1	P		
1DEELE	DENTICULA ELEGANS		P		
1DIVUL	DIATOMA VULGARE	3	2	2	P
1EPSOR	EPITHEMIA SOREX	102	103	102	7
1EPTUR	EPITHEMIA TURGIDA	P		P	
1EUMPS	EUNOTIA PECTINALIS	P		P	
1FRAVA	FRAGILARIA VAUCHERIAE		P		
1GOACU	GOMPHONEMA ACUMINATUM		1	1	
1GOOLI	GOMPHONEMA OLIVACEUM	4	14	1	
1GOPAR	GOMPHONEMA PARVULUM				11
1GOTRU	GOMPHONEMA TRUNCATUM	1			
1GYSPE	GYROSIGMA SPENCERII		P	P	
1MELVA	MELOSIRA VARIANS	P		P	
1NACRY	NAVICULA CRYPTOCEPHALA	1			1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	3	1	1	P
1NAHEU	NAVICULA HEUFLERI	2		1	1
1NALAN	NAVICULA LANCEOLATA	2		1	2
1NALUZ	NAVICULA LUZONENSIS	3			
1NAMIN	NAVICULA MINIMA			1	
1NANOT	NAVICULA NOTHA	1	6	1	2

1NAPEL	NAVICULA PELLICULOSA		1		
1NARAP	NAVICULA RADIOSA VAR. PARVA	P		2	1
1NARHY	NAVICULA RHYNCHOCEPHALA		1		P
1NASEA	NAVICULA SECRETA VAR. APICULATA		1		
1NASUB	NAVICULA SUBHAMULATA				P
1NATRI	NAVICULA TRIPUNCTATA	1	6	2	3
1NAVIR	NAVICULA VIRIDULA		16		
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	26		11	3
1NIAPI	NITZSCHIA APICULATA				4
1NIDIS	NITZSCHIA DISSIPATA		3	P	12
1NIFRU	NITZSCHIA FRUSTULUM	5	P	P	17
1NILAT	NITZSCHIA LATENS				1
1NILIN	NITZSCHIA LINEARIS			P	1
1NIPAL	NITZSCHIA PALEA	1	1		3
1NISIE	NITZSCHIA SIGMOIDEA	P	P		
1NITPL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS		P		
1NISPP	NITZSCHIA SP.			1	
1PISPP	PINNULARIA SP.	P			
1RHCUR	RHOICOSPHENIA CURVATA	6	9	13	6
1RHGIV	RHOPALODIA GIBBA	P	P		P
1SUOVL	SURIRELLA OVALIS				P
1SUOVA	SURIRELLA OVATA				2
1SYULN	SYNEDRA ULNA				P
1SYULC	SYNEDRA ULNA VAR. CONSTRICTA		P	1	P
2CLAGL	CLADOPHORA GLOMERATA		40		
2CLASP	CLADOPHORA SP.	32		64	16
2PALCH	PALMELLA STAGE OF CHAETOPHORACEAE	11			
4ANASP	ANABAENA SP.	P	P	P	P
4CHAE	CHAMAESIPHON INCRUSTANS	P	P	P	
4LYNSP	LYNGBYA SP.			P	
4OSSPP	OSCILLATORIA SP.		1	P	1
4PHSPP	PHORMIDIUM SP.	5	21	P	P
4CALSP	CALOTHRIX SP.	66	P	10	
4MESPP	MERISMOPEDIA SP.				P
4TOSPP	TOLYPOTHRIX SP.	13	P	5	
5EUSPP	EUGLENA SP.				P
6ADVIO	AUDOUINELLA VIOLACEA	29			

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 29
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 081880
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	13	8	13	13
NUMBER OF DROPS	8	3	3	4
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES MINUTISSIMA	18	100	104	105
1AMPER	AMPHORA PERPUSILLA	2	3	2	3
1CAVEN	CALONEIS VENTRICOSA			1	
1COCPE	COCCONEIS PEDICULUS	P			3
1COCPL	COCCONEIS PLACENTULA	P		3	2
1CYCME	CYCLOTELLA MENEGHINIANA	P	4	9	4
1CYMMI	CYMBELLA MINUTA		P		
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	10	10	17	21
1DITEE	DIATOMA TENUE VAR. ELONGATUM				P
1DIVUL	DIATOMA VULGARE	2	P	3	3
1EPSOR	EPITHEMIA SOREX	101	13	10	2
1FRAVA	FRAGILARIA VAUCHERIAE			1	1
1FRURH	FRUSTULIA RHOMBOIDES			1	
1GOLI	GOMPHONEMA OLIVACEUM		4	2	
1GOPAR	GOMPHONEMA PARVULUM	2			3
1GYSPE	GYROSIGMA SPENCERII			1	
1MERCI	MERIDION CIRCULARE	P			
1NACIN	NAVICULA CINCTA				1
1NACRY	NAVICULA CRYPTOCEPHALA	1			1
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	P			2
1NALAN	NAVICULA LANCEOLATA	2			
1NANOT	NAVICULA NOTHA				2
1NAPYG	NAVICULA PYGMAEA			P	
1NARHY	NAVICULA RHYNCHOCEPHALA		P	2	
1NASEA	NAVICULA SECRETA VAR. APICULATA	1			
1NATRI	NAVICULA TRIPUNCTATA		3	6	
1NAVIR	NAVICULA VIRIDULA				6
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	5	2	11	

1NAVIL	NAVICULA VIRIDULA VAR. LINEARIS		1		
1NIAPI	NITZSCHIA APICULATA				1
1NIDIS	NITZSCHIA DISSIPATA	2	16	12	3
1NIFON	NITZSCHIA FONTICOLA	P			
1NIFRU	NITZSCHIA FRUSTULUM	13	11	26	47
1NIHOL	NITZSCHIA HOLSATICA				2
1NIHUN	NITZSCHIA HUNGARICA			6	
1NILIN	NITZSCHIA LINEARIS	2		5	
1NIPAL	NITZSCHIA PALEA	1		2	P
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			P	
1NISPP	NITZSCHIA SP.	4			
1PIMAI	PINNULARIA MAIOR			P	
1PLDEL	PLEUROSIGMA DELICATISSIMA	1			
1RHCUR	RHOICOSPHENIA CURVATA	2	3	9	62
1RHGIV	RHOPALODIA GIBBA	P			
1STHAN	STEPHANODISCUS HANTZSCHII		4		
1SUOVL	SURIRELLA OVALIS	P		P	1
1SUOVA	SURIRELLA OVATA	P	1	2	2
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA				4
1SYULN	SYNEDRA ULNA	1			3
2CHAPP	PULBOCHAETA SP.	P			
2CHASP	CHAETOCIM SP.			P	
2CLAGL	CLADOPHORA GLOMERATA			20	
2CLASP	CLADOPHORA SP.	20			20
2SCEAC	SCENEDESMUS ACUMINATUS			P	
2SCEQU	SCENEDESMUS QUADRICAUDA	P	P		P
2STIE	STIGEOCLONIUM TENUE			P	P
4ANASP	ANABAENA SP.	1		P	P
4OSSPP	OSCILLATORIA SP.	2	2	P	P
4PHSPP	PHORMIDIUM SP.				5
4CALSP	CALOTHRIX SP.	20			
4MESPP	MERISMOPEDIA SP.	P	P	P	
4TUSPP	TOLYPOTHRIX SP.	P	5		24
6ADVIO	AUDOUINELLA VIOLACEA	12	10		

OCTOBER

PERIPHYTON BENCH SHEET

RIO BLANCO OIL SHALE COMPANY

STATION - 13
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 101480
SAMPLE STATION DESCRIPTION - CORRAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	28	29	41	18
NUMBER OF DROPS	25	20	21	20
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	45	45	45

		NUMBER OBSERVED			
CODE	TAXON	REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	2	2		
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA		1		1
1ACMIN	ACHNANTHES MINUTISSIMA	103	100	102	31
1CYCME	CYCLOTELLA MENEGHINIANA	3			2
1CYMAF	CYMBELLA AFFINIS	P			P
1CYMMI	CYMBELLA MINUTA	2	1		
1DIVUL	DIATOMA VULGARE		P		
1DISPP	DIATOMA SP.			P	
1EPSOR	EPITHEMIA SOREX		3		P
1FRAVA	FRAGILARIA VAUCHERIAE				2
1GOANG	GOMPHONEMA ANGUSTATUM		P		
1NACRY	NAVICULA CRYPTOCEPHALA			P	
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	1			
1NAHEU	NAVICULA HEUFLERI	2	P		
1NAPUP	NAVICULA PUPULA				P
1NASEA	NAVICULA SECRETA VAR. APICULATA	3	16	1	5
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	3	3	2	18
1NIACI	NITZSCHIA ACICULARIS	2			
1NIDIS	NITZSCHIA DISSIPATA		1		
1NIFRU	NITZSCHIA FRUSTULUM	2	4	1	4
1NILIN	NITZSCHIA LINEARIS		P		P
1NIPAL	NITZSCHIA PALEA		1		
1PHCUR	EHOICOSPHENIA CURVATA		P	3	
1SUOVA	SURIRELLA OVATA		1		P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS			?	
2ULSPP	ULOTHRIX	4			
4OSSPP	OSCILLATORIA SP.	P			
4PHSPP	PHORMIDIUM SP.				P
6MASPP	MATRACHESPERMUM SP.	14	18		100

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 14
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 101480
SAMPLE STATION DESCRIPTION - COPPAL GULCH ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	5	5	4	6
NUMBER OF DROPS	18	20	22	15
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAN	ACHNANTHES LANCEOLATA	24	23	23	
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA				8
1ACMIN	ACHNANTHES MINUTISSIMA	113	134	154	110
1AMOVP	AMPHORA OVALIS		P	P	
1COCPL	COCCONEIS PLACENTULA	P			P
1CYCME	CYCLOTELLA MENEGHINIANA	P	P	3	P
1CYOSU	CYMATOPLEURA SOLEA	P			
1CYMAF	CYMBELLA AFFINIS		P		
1CYMCI	CYMBELLA CISTULA				1
1CYMMI	CYMBELLA MINUTA		P		1
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	P	P	P	?
1DEELE	DENTICULA ELEGANS	P		1	
1FRACR	FRAGILARIA CROTONENSIS			P	
1GOANG	GOMPHONEMA ANGUSTATUM	P		3	
1GOPAR	GOMPHONEMA PARVULUM				?
1GYSPE	GYROSIGMA SPENCERII	P	P	P	P
1HANAM	HANTZSCHIA AMPHIOXYS	P	P	P	P
1MELVA	MELOSIRA VARIANS	P			
1NAAPV	NAVICULA ARVENSIS				1
1NACIN	NAVICULA CINCTA		P		
1NACUS	NAVICULA CUSPIDATA			P	

1NAHEU	NAVICULA HEUFLERI	5		1	1
1NAPEL	NAVICULA PELLICULOSA	2			
1NASEA	NAVICULA SECRETA VAR. APICULATA	30	3	1	14
1NAVIP	NAVICULA VIRIDULA	P	P	P	
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	1			P
1NIACI	NITZSCHIA ACICULARIS	2		P	2
1NIFRU	NITZSCHIA FRUSTULUM	22	3	9	3
1NIHUN	NITZSCHIA HUNGARICA	P			
1NILIN	NITZSCHIA LINEARIS	P	P		P
1NIMIC	NITZSCHIA MICROCEPHALA	P			
1NIPAL	NITZSCHIA PALEA	P			1
1PIBIC	PINNULARIA BICEPS	P			
1PIMAI	PINNULARIA MAIOR	P	1	P	
1PIMES	PINULARIA MESOLEPTA		P		
1PISPP	PINNULARIA SP.	P			
1RHCUR	RHOICOSPHENIA CURVATA	P	P	P	
1RHGIV	RHOPALODIA GIBBA		P		
1SUOVL	SURIRELLA OVALIS	P	P	P	1
1SUOVA	SURIRELLA OVATA	1	P	1	P
1SUSPI	SURIRELLA SPIRALIS	P			
1SYACU	SYNEDRA ACUS				P
1SYFAS	SYNEDRA FASCICULATA	P		P	
1SYMIN	SYNEDRA MINUSCULA			P	3
1SYULN	SYNEDRA ULNA	P	P		
1SYSPP	SYNEDRA SP.				P
1THSPP	THALASSIOSIRA FLUVIATILIS		P	P	P
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2			
2CLOSP	CLOSTERIUM SP.				P
2SPISP	SPIROGYRA SP.			P	P
3VAUSP	VAUCHERIA SP.				P
4PHSPP	PHORMIDIUM SP.		P		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 20
NUMBER OF REPLICATES - 8
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 101480
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 179

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	6	5	4	4	5	4	4	4
NUMBER OF CROPS	18	18	26	20	12	15	20	12
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	45	45	45	45	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	122	117	142	130	64	110	150	108
1ACLAN	ACHNANTHES LANCEOLATA						1		
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	5							
1AMOVP	AMPHORA OVALIS	P	P						
1AMPER	AMPHORA PERPUSILLA						P		
1AMVEN	AMPHORA VENETA					P			
1CYCME	CYCLOTELLA MENEGHINIANA	10	3	P	5	4	3	2	7
1CYMCY	CYMBELLA CYMBIFORMIS							P	P
1CYMM1	CYMBELLA MINUTA	P		3	2	1	6	1	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	1	3	6	P	2	3	11	1
1CYMSP	CYMBELLA SP.		P	P					
1ENPAL	ENTOMONEIS PALUDOSA			P				P	P
1EPSOR	EPITHEMIA SOREX								3
1FRAC8	FRAGILARIA CROTONENSIS			3			P	P	P
1FRAVA	FRAGILARIA VAUCHERIAE	P					P		
1GOGRA	GOMPHONEMA GRACILE		1	P	P		1		P
1GYSPE	GYROSIGMA SPENCERII	P		P		P			
1NACAP	NAVICULA CAPITATA						P		
1NACPV	NAVICULA CRYPTOCEPHALA VAR. VENETA		P					P	
1NACUS	NAVICULA CUSPIDATA	P				P			
1NAHAL	NAVICULA HALOPHILA		2			P			1
1NAHEU	NAVICULA HEUFLERI						1	2	1
1NAMUT	NAVICULA MUTICA						P		
1NASEA	NAVICULA SECRETA VAR. APICULATA		P	P	1	P	F		
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	P	P			P			
1NIAPI	NITZSCHIA APICULATA	P	1	P			2		P

1NIFRU	NITZSCHIA FRUSTULUM	9		3		1	3	5	
1NIHOL	NITZSCHIA HOLSATICA					P			
1NIHUN	NITZSCHIA HUNGARICA				P				
1NIPAL	NITZSCHIA PALEA							P	
1NIROM	NITZSCHIA ROMANA			P					
1NISIE	NITZSCHIA SIGMOIDEA							P	
1NISPP	NITZSCHIA SP.	P					1		
1PIBOR	PINNULARIA BOREALIS						P		
1RHGIV	RHOPALODIA GIBBA				1				
1SULIN	SURIRELLA LINEARIS			P		P	P		P
1SUOVL	SURIRELLA OVALIS	P	P	P		P	F	P	P
1SUOVA	SURIRELLA OVATA							P	2
1SUSPI	SURIRELLA SPIRALIS			P					P
1SYACU	SYNEDRA ACUS	P		1	P	P	1	1	1
1SYMIN	SYNEDRA MINUSCULA	1			P	1			
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA		P		P			3	P
1SYSPP	SYNEDRA SP.			P					
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	2				3			
2CHAPR	PULSOCHAETA SP.	54	34	5	33	120	25	28	45
2CLASP	CLADOPHORA SP.	P					P	P	P
2SPISP	SPIROGYRA SP.						P		P
4CALSP	CALOTHRIX SP.					P			

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 21
NUMBER OF REPLICATES - 8
AREA SCRAPED - 3000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 10140
SAMPLE STATION DESCRIPTION - YELLOW CREEK ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
AREA OF TRANSECT	.0324	.0324	.0324	.0324	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	5	5	5	5	5	5	5	5
NUMBER OF DROPS	20	25	20	21	23	23	22	21
COVERSLIP AREA	625	625	625	625	625	625	625	625
DROPS/ML	45	45	45	45	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4	REP5	REP6	REP7	REP8
1ACAFF	ACHNANTHES AFFINIS	121	140	104	149	118	118	106	100
1ACLAN	ACHNANTHES LANCEOLATA								1
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA		P	1				P	
1AMCOF	AMPHORA COFFEIFORMIS	P	P	6	4	1		6	6
1CYCME	CYCLOTELLA MENEGHINIANA	3	2	5	P	1	P	9	8
1CYMCI	CYMBELLA CISTULA					P	P	P	P
1CYMMI	CYMBELLA MINUTA	10	P		3			1	1
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	1	2	4	7	5	3	4	9
1CYMSP	CYMBELLA SP.			P					
1DIVUL	DIATOMA VULGARE				P			P	
1ENPAL	ENTOMONEIS PALUDOSA	P				P	1		
1EPSOR	EPITHEMIA SOREX	?	P			P			
1FRAVA	FRAGILARIA VAUCHERIAE		?	?		P			P

1GOGRA	GOMPHONEMA GRACILE	1	1	2			P	2	P
1GOPAR	GOMPHONEMA PARVULUM						P		
1GYSPE	GYROSIGMA SPENCERII			P	P				P
1HAMAM	HANTZSCHIA AMPHIOXYS				P				
1MAELL	MASTOGLOIA ELLIPTICA					P			
1NACIN	NAVICULA CINCTA			?					
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA						P		
1NACUS	NAVICULA CUSPIDATA								P
1NAHAL	NAVICULA HALOPHILA			3		2	1		1
1NAHEU	NAVICULA HEUFLERI	1							
1NAPYG	NAVICULA PYGMAEA					1			
1NASAL	NAVICULA SALINARUM				1				
1NASEA	NAVICULA SECRETA VAR. APICULATA		1			P			P
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA						P		
1NIAPI	NITZSCHIA APICULATA	P					P	P	P
1NIFRU	NITZSCHIA FRUSTULUM				1			5	
1NIHOL	NITZSCHIA HOLSATICA	2							
1NIHUN	NITZSCHIA HUNGARICA				P				
1NILIN	NITZSCHIA LINEARIS				1				
1NIMIC	NITZSCHIA MICROCEPHALA				P	1			
1NIPAL	NITZSCHIA PALEA			P					
1NISIE	NITZSCHIA SIGMOIDEA				P				
1NITRL	NITZSCHIA TRYBLIONELLA VAR. LEVIDENSIS			P		P		1	
1PHCUR	PHOICOSPHENIA CURVATA	P							
1SULIN	SURIRELLA LINEARIS					P			
1SUOVL	SURIRELLA OVALIS	1		1	1	P	P	P	P
1SUOVA	SURIRELLA OVATA	P	1		P	1	P	P	
1SUSPI	SURIRELLA SPIRALIS					P			
1SYACU	SYNEDRA ACUS	3	P	P					
1SYFAS	SYNEDRA FASCICULATA				P		P	1	P
1SYMIN	SYNEDRA MINUSCULA			1					
1SYPUL	SYNEDRA PULCHELLA VAR. LANCEOLATA	P		1			6	7	11
1SYULL	SYNEDRA ULNA VAR. LANCEOLATA					4			
2CHAPR	PLEUROCHAETA SP.	25	R	20	30	37	25	26	53
2CLASP	CLADOPHORA SP.	P		P					
2ENSPP	ENTEROMORPHA SP.						30		
2SPISP	SPIROGYRA SP.	P	P	P	6		P		P
2ULSPP	ULOTHRIX	P							
4ANASP	ANABAENA SP.	P	P	P					
4OSSPP	OSCILLATORIA SP.			P		P			
4CALSP	CALOTHRIX SP.								P
4MESPP	MERISMOPEDIA SP.	P		P		P			P

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 27
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 101580
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DUFFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0000
NUMBER OF TRANSECTS	15	18	20	0
NUMBER OF CROPS	10	3	24	0
COVERSLIP AREA	625	625	625	0
DROPS/ML	45	45	45	0

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACMIN	ACHNANTHES MINUTISSIMA	6		7	
1AMPEL	AMPHIPLEURA PELLUCIDA			1	
1AMPER	AMPHORA PERPUSILLA			3	
1CAAMP	CALONEIS AMPHISBAENA		P	1	
1COCPE	COCCONEIS PEDICULUS	3	6	31	
1COCPL	COCCONEIS PLACENTULA			5	
1CYCME	CYCLOTELLA MENEGHINIANA			1	
1CYDSO	CYMATOPLEURA SOLEA			1	
1CYMMI	CYMBELLA MINUTA	3		1	
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	2	6	2	
1DIVUL	DIATOMA VULGARE	11	1	P	
1EPSOR	EPITHEMIA SOREX	101	100	107	
1FRALE	FRAGILARIA LEPTOSTAURON		1		
1FRAPI	FRAGILARIA PINNATA		1	1	
1FRAVA	FRAGILARIA VAUCHERIAE		3		
1GOACU	GOMPHONEMA ACUMINATUM	P			
1GOIMP	GOMPHONEMA INTRICATUM VAR. PUPILA		1		
1GOOLI	GOMPHONEMA OLIVACEUM		6		

1GOPAR	GOMPHONEMA PARVULUM	1			
1GOTRU	GOMPHONEMA TRUNCATUM		1	1	
1GYSPE	GYROSIGMA SPENCERII	P	P	3	
1NACIN	NAVICULA CINCTA	1			
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA	3	1	10	0
1NAGRA	NAVICULA GRACILOIDES			1	
1NAHEU	NAVICULA HEUFLERI	1		2	
1NALAN	NAVICULA LANCEOLATA	P		7	
1NALUZ	NAVICULA LUZONENSIS		1		
1NAMIN	NAVICULA MINIMA			3	
1NAPUP	NAVICULA PUPULA	1			
1NAPYG	NAVICULA PYGMAEA			1	
1NARAD	NAVICULA RADIOSA	P			
1NARHY	NAVICULA RHYNCHOCEPHALA			6	
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	2	6	
1NATRI	NAVICULA TRIPUNCTATA	5	4	1	
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	2	6	15	
1NESSP	NEIDIUM SP.		P		
1NIACI	NITZSCHIA ACICULARIS		1	1	
1NIRUL	NITZSCHIA RULNHEIMIANA			P	
1NIDIS	NITZSCHIA DISSIPATA	1	9	1	
1NIFRU	NITZSCHIA FRUSTULUM	7		4	
1NIHOL	NITZSCHIA HOLSATICA		3		
1NIHUN	NITZSCHIA HUNGARICA	1		P	
1NIIGN	NITZSCHIA IGNORATA		1		
1NILIN	NITZSCHIA LINEARIS	1	6	3	
1NIPAL	NITZSCHIA PALEA	1	6		
1NISIE	NITZSCHIA SIGMOIDEA			P	
1NISPP	NITZSCHIA SP.		3		
1PISPP	PINNULARIA SP.			1	
1PLDEL	PLEUROSIGMA DELICATISSIMA		2	P	
1PHCUR	RHOICOSPHENIA CURVATA	9	8	16	
1RHGIV	RHOPALODIA GIBBA	P	P	P	
1SYDEL	SYNEDRA DELICATISSIMA			P	
1SYMIN	SYNEDRA MINUSCULA			1	
1SYULN	SYNEDRA ULNA	P	1		
1SYULC	SYNEDRA ULNA VAR. CONSTRICTA	1		3	
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	1			
2CLAGL	CLADOPHORA GLOMERATA	3	10	113	
4ANASP	ANABAENA SP.		6	P	
4CHAMI	CHAMAESIPHON INCRUSTANS	P			
4OSSPP	OSCILLATORIA SP.		P	P	
4PHSPP	PHORMIDIUM SP.		4	11	
4CALSP	CALOTHRIX SP.	P			
4DACRA	DACTYLOCOCCOPSIS RAPHIDIOIDES		P		
4TOSPP	TOLYPOTHRIX SP.	P			
6LEFUC	LEMANEA FUCINA	P			

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

STATION - 25
NUMBER OF REPLICATES - 4
AREA SCRAPED - 5000 MM2 ORIGINAL VOLUME - 100 ML SUBSAMPLE VOLUME - 10 ML
CONCENTRATE VOLUME - 1.0 SAMPLE COLLECTION DATE - 101580
SAMPLE STATION DESCRIPTION - WHITE RIVER ANALYST - DLEFORD PROJECT NO. - 129

VARIABLE PARAMETERS	REP1	REP2	REP3	REP4
AREA OF TRANSECT	.0324	.0324	.0324	.0324
NUMBER OF TRANSECTS	13	9	9	10
NUMBER OF DROPS	20	4	4	4
COVERSLIP AREA	625	625	625	625
DROPS/ML	45	45	45	45

CODE	TAXON	NUMBER OBSERVED REP1	REP2	REP3	REP4
1ACLAD	ACHNANTHES LANCEOLATA VAR. DUBIA	1			P
1ACMIN	ACHNANTHES MINUTISSIMA	110	102	103	101
1AMCOF	AMPHORA COFFEIFORMIS			2	
1COCPE	COCCONEIS PEDICULUS	2	P	14	P
1COCPL	COCCONEIS PLACENTULA		P		1
1CYCME	CYCLOTELLA MENEGHINIANA	1	1		2
1CYMME	CYMBELLA MEXICANA		P	1	
1CYMMI	CYMBELLA MINUTA				2
1CYMMS	CYMBELLA MINUTA VAR. SILESIACA	86	59	13	39
1CYMSI	CYMBELLA SINUATA			P	
1DIVUL	DIATOMA VULGARE	5	3	3	1
1ENPAL	ENTOMONEIS PALUDOSA			P	
1EPSUR	EPITHEMIA SOREX	6	2	7	3
1FRACR	FRAGILARIA CROTONENSIS				P
1FRAVA	FRAGILARIA VAUCHERIAE	2			
1GOACU	GOMPHONEMA ACUMINATUM		P	3	
1GOANG	GOMPHONEMA ANGUSTATUM		1		
1GOINP	GOMPHONEMA INTRICATUM VAR. PUMILA				1
1GOOLI	GOMPHONEMA OLIVACEUM	2		6	P
1GOPAR	GOMPHONEMA PARVULUM	1	3	3	1
1GOSUM	GOMPHONEMA SUBCLAVATUM VAR. MEXICANUM		P		
1GYSPE	GYROSIGMA SPENCERII				P
1HAARC	HANNAEA ARCUS		P		
1HANAM	HANTZSCHIA AMPHIOXYS		P		
1NACRY	NAVICULA CRYPTOCEPHALA		1		
1NACRV	NAVICULA CRYPTOCEPHALA VAR. VENETA		2	P	
1NAELG	NAVICULA ELGINENSIS			P	

1NAGRA	NAVICULA GRACILOIDES				1
1NAHEU	NAVICULA HEUFLERI		P		
1NALAN	NAVICULA LANCEOLATA			P	
1NAMIS	NAVICULA MINUSCULA			1	
1NANOT	NAVICULA NOTHA	4	P		2
1NAPUP	NAVICULA PUPULA		P		
1NARHY	NAVICULA RHYNCHOCEPHALA	P			
1NASAI	NAVICULA SALINARUM VAR. INTERMEDIA	3	P		
1NASEA	NAVICULA SECRETA VAR. APICULATA	1	P	1	1
1NATRI	NAVICULA TRIPUNCTATA		5		P
1NAVIR	NAVICULA VIRIDULA		P		
1NAVIA	NAVICULA VIRIDULA VAR. AVENACEA	2		13	3
1NIAPI	NITZSCHIA APICULATA				P
1NIDIS	NITZSCHIA DISSIPATA			1	P
1NIFON	NITZSCHIA FONTICOLA	2		P	
1NIFRU	NITZSCHIA FRUSTULUM	2	P	23	4
1NIHOL	NITZSCHIA HOLSATICA				P
1NIHUN	NITZSCHIA HUNGARICA		P		P
1NILIN	NITZSCHIA LINEARIS		1	1	
1NIMIC	NITZSCHIA MICROCEPHALA	1	P		
1NIPAL	NITZSCHIA PALEA	P			
1NISPP	NITZSCHIA SP.		1		1
1PLDEL	PLEUROSIGMA DELICATISSIMA				P
1PHCUR	PHOICOSPHENIA CURVATA	11	P	24	3
1SUOVL	SURIRELLA OVALIS		P		
1SUOVA	SURIRELLA OVATA		P	1	P
1SYULN	SYNEDRA ULNA	P	P		1
1SYULC	SYNEDRA ULNA VAR. CONSTRICTA	1	P		
1UNPEN	UNIDENTIFIED PENNATE DIATOMS	5			
2CLAGL	CLADOPHORA GLOMERATA			55	25
2SPISP	SPIROGYRA SP.			P	
4ANASP	ANABAENA SP.	P			P
4LYNSP	LYNGBYA SP.			P	
4OSSPP	OSCILLATORIA SP.				P
4CALSP	CALOTHRIX SP.	P			
4TOSPP	TOLYPOTHRIX SP.				P
6LEFUC	LEMANEA FUCINA	50	76		

P = PRESENT IN SAMPLE BUT NOT OBSERVED ON TRANSECT

APPENDIX 4-2.3

Periphyton Biomass Data for all Stations
by Sampling Date for 1980

PERIPHYTON BIOMASS BENCH SHEET
PIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - APRIL 1980
ANALYST - R.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
480-129	13A	51.6076	51.5439
481-129	13B	52.3554	52.2851
482-129	14A	55.4332	55.0650
483-129	14B	50.1032	49.9301
484-129	20A	46.9175	46.8600
485-129	20B	47.9487	47.8954
486-129	21A	44.6346	44.5860
487-129	21B	46.8074	46.7038
488-129	27A	56.4000	55.9253
489-129	27B	54.9231	54.2680
490-129	29A	48.4719	48.4058
491-129	29B	47.6367	47.3870

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - MAY 1980
ANALYST - R.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
516-129	13A	48.6567	48.6456
517-129	13B	44.7139	44.7012
518-129	14A	52.5539	52.4901
519-129	14B	52.9972	52.9460
520-129	20A	44.7305	44.6706
521-129	20B	46.2631	46.2437
522-129	21A	46.9463	46.9303
523-129	21B	47.7749	47.7647
524-129	27A	52.0649	52.0170
525-129	27B	50.3548	50.3110
526-129	29A	48.6022	48.5321
527-129	29B	45.6283	45.5792

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JUNE 1980
ANALYST - R.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
528-129	13A	.1515	.1269
529-129	13B	.1011	.0747
530-129	14A	.2547	.2249
531-129	14B	.3653	.3324
532-129	20A	.3162	.2219
533-129	20B	.2905	.2239
534-129	21A	.4045	.2726
535-129	21B	.3486	.2616

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - JULY 1980
ANALYST - P.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
591-129	13A	.2639	.2419
592-129	13B	.2314	.2218
594-129	14A	.7755	.7537
595-129	14B	.8558	.8259
596-129	20A	.7175	.5600
597-129	20B	.5022	.4195
598-129	21A	.4394	.4209
599-129	21B	.4543	.3992
600-129	27A	1.7391	1.53HB
601-129	27B	1.6492	1.4686
602-129	29A	1.1243	1.0241
603-129	29B	1.2634	1.1485

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - AUGUST 1980
ANALYST - R.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-PER	DRY WEIGHT (GM)	ASH WEIGHT (GM)
604-129	13A	.0490	.0135
605-129	13B	.2250	.2043
606-129	14A	1.2377	1.1340
607-129	14B	1.0150	.0779
608-129	20A	.5310	.4226
609-129	20B	.0107	.0024
610-129	21A	1.1179	.0095
611-129	21B	.0521	.0701
612-129	27A	4.0019	4.3713
613-129	27B	3.7004	3.5050
614-129	29A	4.1323	3.0311
615-129	29B	4.0074	4.0436

PERIPHYTON BIOMASS BENCH SHEET
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - OCTOBER 1980
ANALYST - R.DUFFORD
AREA SCRAPED - 50 CM2

LOG #	STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)
680-129	13A	.7304	.7002
681-129	13B	.1281	.1145
682-129	14A	2.3944	2.2690
683-129	14B	.3272	.2848
684-129	20A	2.9330	2.1822
685-129	20B	7.4367	6.9081
686-129	21A	.7876	.5990
687-129	21B	.9352	.7288
688-129	27A	2.7224	2.5296
689-129	27B	7.4367	6.4081
690-129	29A	7.0418	6.6286
691-129	29B	24.4017	23.2037

APPENDIX 4-2.4

Periphyton Density and Species Diversity Calculations
for all Stations by Sampling Date for 1980

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPETITIONS - 4
DATE - 042180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA	9.8	40.9	35.0	17.1	25.7	14.7
ACHNANTHES MINUTISSIMA	72.1	36.7	10.6	6.1	31.4	30.3
AMPHORA VENETA	2.4	.0	.0	.0	.6	1.2
CYCLOTELLA PENEE-PHINIANA	.0	1.2	.0	.0	.3	.6
CYMBELLA AFFINIS	.0	.0	.0	.4	.1	.2
CYMBELLA MINUTA	.0	1.8	.0	.4	.6	.9
CYMBELLA SINUATA	2.4	3.7	.8	.0	1.7	1.6
DIATOMA HIEMALE	.0	.0	1.6	2.0	.9	1.1
DIATOPA SP.	2.4	4.3	.0	.0	1.7	2.1
EPITHEMIA SOREX	.0	.0	1.6	.4	.5	.8
FRAGILARIA CAPUCINA	.0	.0	.8	.0	.2	.4
FRAGILARIA VAUCHERIAE	1.2	47.7	81.5	33.4	40.9	33.3
GOMPHONEMA ANGUSTATUM	.0	2.4	4.9	.0	1.8	2.3
GOMPHONEMA OLIVACEUM	4.9	6.1	.0	.4	2.9	3.1
GOMPHONEMA PARVULUM	.0	.0	.0	5.3	1.3	2.6
GYROSIGMA SPENCERII	.0	.0	.0	.4	.1	.2
HANTZSCHIA AMPHIOXYS	.0	.0	.0	.4	.1	.2
MERIDION CIRCULARE	.0	6.1	9.0	5.3	5.1	3.7
NAVICULA ARVENSIS	.0	.0	.8	.0	.2	.4
NAVICULA AURICULATA	.0	.0	.0	.4	.1	.2
NAVICULA CRYPTOCEPHALA	4.9	1.2	.0	.0	1.5	2.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	7.3	4.5	3.0	3.6
NAVICULA HEUFLERI	.0	.0	.0	1.2	.3	.6
NAVICULA PELLICULOSA	.0	3.7	1.6	2.0	1.8	1.5
NAVICULA PYGMAEA	.0	.0	.8	.0	.2	.4
NAVICULA SECRETA VAR. APICULATA	11.0	26.3	19.6	13.0	17.5	6.9
NAVICULA VIRIDULA	255.4	12.8	10.6	.0	69.7	123.9
NITZSCHIA APICULATA	.0	.6	.0	.0	.2	.3
NITZSCHIA DENTICULA	1.2	.0	.0	.0	.3	.6
NITZSCHIA DISSIPATA	1.2	.0	.0	.0	.3	.6
NITZSCHIA FONTICOLA	.0	4.9	5.7	1.6	3.1	2.7
NITZSCHIA FRUSTULUM	.0	3.1	5.7	2.0	2.7	2.4
NITZSCHIA PALEACEA	.0	11.6	.0	.0	2.9	5.8
NITZSCHIA LINEARIS	.0	6.6	6.5	6.5	5.4	3.7
NITZSCHIA PALEA	.0	1.8	3.3	4.1	2.3	1.8
PINNULARIA BOREALIS	.0	1.2	.8	.0	.5	.6
RHOPALODIA GIBBA	.0	.0	.0	1.2	.3	.6
SURIRELLA OVALIS	.0	.0	.0	1.2	.3	.6
SURIRELLA OVATA	17.1	33.0	31.8	18.7	25.2	8.4
SYNEDRA PINNUSCULA	.0	2.4	1.6	3.7	1.9	1.5
DIVISION TOTAL	394.2	262.2	242.0	142.0	259.6	104.2

CHLOROPHYTA						
MICROSPORA SP.	.0	.0	23.4	.0	5.9	11.8
ULOTHRIX	.0	.0	.0	40.7	10.2	20.4
ULOTHRIX ZONATA	.0	63.6	.0	.0	15.9	31.8
DIVISION TOTAL	.0	63.6	23.4	40.7	32.0	28.9
CHRYSOPHYTA						
CYANOPHYTA						
PHORMIDIUM SP.	231.0	13.6	.0	.0	61.1	113.4
DIVISION TOTAL	231.0	13.6	.0	.0	61.1	113.4
TOTAL DENSITY	617.2	336.2	265.6	172.7	348.7	191.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.598
VARIANCE = .0038
MAXIMUM INDEX = 3.784
EVENNESS = .687
NO OF SPECIES = 44

STATION NUMBER - 14
NUMBER OF REPETITIONS - 4
DATE - 042180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA	41.7	9.3	10.8	138.9	50.1	61.0
ACHNANTHES MINUTISSIMA	1347.2	305.6	378.4	370.4	599.9	499.2
CYMBELLA AFFINIS	.0	.0	.0	4.6	1.2	2.3
CYMBELLA MINUTA	.0	.0	.0	4.6	1.2	2.3
DENTICULA ELEGANS	.0	.0	.0	9.3	2.3	4.6
FRAGILARIA VAUCHERIAE	.0	.0	3.6	4.6	2.1	2.4
GOMPHONEMA ANGUSTATUM	.0	4.6	.0	4.6	2.3	2.7
GYROSIGMA SPENCERII	.0	.0	.0	9.3	2.3	4.6
NAVICULA CUSPIDATA	.0	.0	.0	4.6	1.2	2.3
NAVICULA PELLICULOSA	13.9	.0	.0	.0	3.5	6.9
NAVICULA RHYNCHOCEPHALA	41.7	.0	.0	.0	10.4	20.8
NAVICULA SECRETA VAR. APICULATA	562.5	486.1	132.7	550.9	433.0	203.1
NAVICULA VIRIDULA	13.9	23.1	.0	32.4	17.4	13.8
NITZSCHIA ACICULARIS	69.4	13.9	.0	37.0	30.1	30.4
NITZSCHIA DISSIPATA	6.9	.0	.0	.0	1.7	3.5
NITZSCHIA FONTICOLA	.0	9.3	.0	.0	2.3	4.6
NITZSCHIA HUNGARICA	.0	4.6	.0	.0	1.2	2.3
NITZSCHIA LINEARIS	6.9	46.3	.0	27.8	20.3	21.0
NITZSCHIA PALEA	.0	.0	.0	9.3	2.3	4.6
PINNULARIA PERISSONII	.0	.0	.0	9.3	2.3	4.6
SURIRELLA OVATA	.0	13.9	21.5	.0	8.6	10.7
SYNEDRA PULCHELLA	.0	.0	.0	4.6	1.2	2.3
SYNEDRA ULNA	48.6	.0	14.3	27.8	22.7	20.7
THALASSIOSIRA FLUVIATILIS	6.9	4.6	.0	4.6	4.1	2.9
DIVISION TOTAL	2155.7	921.3	559.3	1254.6	1223.7	695.6

CHLOROPHYTA						
CHRYSOPHYTA						
CYANOPHYTA						
ANABAENA SP.	6.9	.0	.0	.0	1.7	3.5
DIVISION TOTAL	6.9	.0	.0	.0	1.7	3.5
TOTAL DENSITY	2166.7	921.3	559.3	1294.6	1225.5	688.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.386
VARIANCE = .0014
MAXIMUM INDEX = 3.219
EVENNESS = .431
NO OF SPECIES = 25

STATION NUMBER - 20
NUMBER OF REPETITIONS - 8
DATE - 042180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES LANCEOLATA	.0	4.8	9.2	9.0	4.9	4.1	.0	.0	4.0	3.8
ACHNANTHES MINUTISSIMA	7.1	40.7	101.9	1.6	.0	.0	.0	26.9	22.2	35.9
CYCLOTELLA MENEGHINIANA	.0	.0	.0	3.3	.0	.0	.0	.0	.4	1.2
CYMBELLA CYMBIFORMIS	1.0	.0	.0	.0	.0	.0	.0	.0	.1	.4
CYMBELLA PINNATA	.0	.0	.0	2.4	.0	.0	.0	.0	.3	.9
CYMBELLA MINUTA VAR. SILESIACA	.0	2.7	.0	.0	.0	.0	.0	.0	.3	1.
DIATOMA HIEMALE	5.1	.0	2.0	1.6	.0	10.3	.0	.0	3.1	5.6
DIATOMA TENUE VAR. ELONGATUM	.0	.0	.0	9.0	.0	.0	.0	.0	1.1	3.2
DIATOMA SP.	.0	1.4	.0	.0	3.3	40.7	.0	.0	5.7	14.7
ENTOMONEIS PALUDOSA	.0	1.4	4.1	1.6	.0	.0	.9	2.0	1.2	1.4
EPITHEMIA SOREX	.0	.0	.0	1.6	.0	.0	.0	.0	.2	.6
FRAGILARIA CAPUCINA	2.0	4.8	29.5	13.0	3.3	4.1	50.4	50.9	19.8	21.1
FRAGILARIA VAUCHERIAE	9.2	1.4	23.4	26.1	8.1	211.9	.9	.0	35.1	72.1
GOMPHONEMA ACUMINATUM	.0	.0	2.0	.0	.0	.0	.0	.0	.3	.7
GOMPHONEMA ANGUSTATUM	1.0	.0	1.0	2.4	2.4	.0	2.9	.0	1.2	1.2
GOMPHONEMA OLIVACEUM	.0	.0	.0	.0	.0	.0	10.2	2.0	1.5	3.6
GOMPHONEMA PARVULUM	.0	1.4	.0	.0	.0	.0	.0	.0	.2	.9
MELOSIRA SP.	.0	.0	.0	.0	1.6	.0	.0	.0	.2	.6
MERIDION CIRCULARE	.0	1.4	1.0	1.6	.0	.0	.0	.0	.9	.7
NAVICULA CRYPTOCEPHALA	.0	.0	.0	.0	.0	4.1	7.1	20.4	3.9	7.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	.0	.0	24.4	3.1	1.0	3.6	8.5
NAVICULA HELFERI	7.1	.0	.0	.0	.0	.0	.0	.0	.9	2.5
NAVICULA MINIMA	.0	1.4	.0	.0	.0	.0	.0	.0	.2	.5
NAVICULA PELLICULOSA	103.9	6.1	29.5	3.3	.8	4.1	.0	50.9	24.7	36.6
NAVICULA PYGMAEA	.0	.0	292.3	.0	.0	.0	.0	.0	36.5	103.3
NAVICULA RADIOSA	.0	.7	.0	.0	.0	.0	.0	.0	.1	.2
NAVICULA SECRETA VAR. APICULATA	14.3	19.7	19.4	12.2	4.1	.0	.0	.0	8.7	8.7
NAVICULA VIRIDULA	.0	.0	.0	2.4	.0	.0	.0	2.0	.6	1.0
NITZSCHIA ACICULARIS	.0	.7	.0	.0	.0	.0	.0	.0	.1	.2
NITZSCHIA DISSIPATA	.0	.0	1.0	.8	.0	.0	.0	.0	.2	.4
NITZSCHIA FONTICOLA	2.0	1.4	3.1	.8	.8	.0	.9	11.2	2.5	3.7
NITZSCHIA FRUSTULUM	1.0	.0	.0	.0	.0	.0	.0	.0	.1	.4
NITZSCHIA HOLSATICA	.0	.0	.0	.0	9.0	122.7	.0	2.0	16.7	42.8
NITZSCHIA HUNGARICA	.0	1.4	1.0	.0	.0	4.1	.9	.0	.9	1.4
NITZSCHIA LINEARIS	1.0	.0	1.0	3.3	.0	.0	.0	2.0	.9	1.2
NITZSCHIA PALEA	.0	10.2	29.5	11.4	3.3	20.4	1.9	2.0	9.7	10.2
PINNULARIA BREBISSONII	.0	.0	.0	.0	.0	4.1	.0	.0	.5	1.4
SURIRELLA OVATA	14.3	69.3	30.6	83.1	28.5	254.7	30.6	36.7	48.7	79.3
SYNEDRA PARASITICA	2.0	1.4	.0	.0	.0	4.1	.0	.0	.9	1.5
SYNEDRA ULNA	2.0	.7	1.0	.0	.0	.0	.0	1.0	.4	.7
SYNEDRA SP.	.0	.0	4.1	.0	.0	.0	.0	.0	.5	1.4
DIVISION TOTAL	172.1	172.5	584.6	190.7	70.1	721.1	107.5	210.6	278.8	238.1

CHLOROPHYTA										
SPIROGYRA SP.	3.1	.0	.0	.0	.0	.0	.0	.0	.4	1.1
DIVISION TOTAL	3.1	.0	.0	.0	.0	.0	.0	.0	.4	1.1
CHRYSOPHYTA										
CYANOPHYTA										
TOTAL DENSITY	176.2	172.5	584.6	190.7	70.1	721.1	107.5	210.8	279.2	237.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.525
VARIANCE = .0047
MAXIMUM INDEX = 3.738
EVENNESS = .676
NO OF SPECIES = 42

STATION NUMBER - 21
NUMBER OF REPETITIONS - 8
DATE - 042180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES LANCEOLATA	.4	.2	.0	.0	.4	.0	4.5	1.6	.9	1.7
ACHNANTHES MINUTISSIMA	.2	.0	.4	1.2	.0	.0	4.1	1.6	.9	1.4
COCCONEIS PEDICULUS	.4	.0	.0	.0	.0	.0	.0	.0	.0	.1
CYCLOTELLA MENEGHINIANA	.0	.0	.0	.0	.0	.0	.0	.2	.2	.4
CYMBELLA MINUTA	.0	.2	.0	.0	.2	.0	.0	.4	.1	.2
DIATOMA HIEMALE	.0	.0	4.9	.0	.0	.0	.0	.0	.6	1.7
DIATOMA TENUE VAR. ELONGATUM	.0	.8	.0	.8	.0	.0	.0	.0	.2	.3
ENTOMONEIS PALUDOSA	.4	.0	.0	.0	.0	2.0	4.1	1.2	1.	1.5
EPITHEMIA SOREX	.0	.0	.0	.4	.0	.0	.0	.0	.1	.1
FRAGILARIA CAPUCINA	7.9	14.7	19.6	8.4	1.2	1.2	.0	8.1	7.6	6.5
FRAGILARIA PINNATA	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
FRAGILARIA VAUCHERIAE	2.0	6.7	3.7	21.4	15.5	23.6	112.4	26.1	26.4	36.0
GOMPHONEMA ACUMINATUM	.0	.0	.0	.0	1.0	.0	.0	.0	.1	.4
GOMPHONEMA ANGUSTATUM	.0	1.2	.8	.0	.0	.0	4.5	.0	.9	1.7
GOMPHONEMA GRACILE	.0	.0	.0	.0	.0	.0	.0	1.2	.2	.4
GOMPHONEMA OLIVACEUM	4.1	.0	.0	.0	1.0	1.2	1.6	.0	1.0	1.4
GOMPHONEMA PARVULUM	.2	.0	.0	.0	.0	1.6	.0	6.5	1.0	2.3
GOMPHONEMA SP.	.0	.2	.0	.0	.0	.0	.0	.0	.0	.1
NAVICULA ARVENSIS	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
NAVICULA CRYPTOCEPHALA	3.5	5.1	6.9	2.0	4.7	5.7	.0	.8	3.6	2.5
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	.0	.4	.0	.0	.0	.1	.1
NAVICULA PELLICULOSA	.2	.0	.0	.0	.0	.0	4.1	4.1	1.0	1.5
NAVICULA SECRETA	.0	.0	.0	.0	.0	.0	.0	12.2	1.5	4.3
NAVICULA VIRIDULA	.2	.0	.8	.0	.4	.0	.0	.8	.3	.4
NITZSCHIA APICULATA	.0	.0	.0	.0	.4	.0	.0	.0	.1	.1
NITZSCHIA DISSIPATA	.0	.6	.0	.0	.2	.0	.0	.0	.1	.2
NITZSCHIA FONTICOLA	.0	.0	.0	.0	.0	.0	9.0	.8	1.2	3.1
NITZSCHIA FRUSTULUM	.0	.0	.0	.0	.0	.0	4.1	3.3	.9	1.7
NITZSCHIA HOLSATICA	.4	1.6	1.2	3.1	3.7	12.6	22.0	8.1	6.6	7.5
NITZSCHIA HUNGARICA	.0	.0	.4	.0	.0	.0	1.6	.8	.4	.6
NITZSCHIA LATENS	.0	.0	.0	.0	.0	.0	.0	.4	.1	.1
NITZSCHIA LINEARIS	.4	.8	.4	.0	.6	.0	.8	1.6	.6	.5
NITZSCHIA PALEA	.4	1.2	.4	.4	.2	2.0	4.5	3.3	1.6	1.7
NITZSCHIA SP.	.0	.0	.0	.0	.0	.0	.0	.4	.1	.1
PINNULARIA INTERMEDIA	.0	.0	.0	.0	.2	.0	.0	.0	.0	.1
SURIRELLA OVALIS	.0	.0	.0	.0	.0	.0	.8	.0	.1	.3
SURIRELLA OVATA	54.0	24.2	40.7	12.2	27.1	41.7	21C.2	143.4	69.1	7C.0
SYNEDRA PINNICULA	.2	.0	.0	1.0	.0	.0	.0	.0	.2	.4
SYNEDRA ULNA	.2	.0	.0	.0	.2	.0	.0	.0	.1	.1
DIVISION TOTAL	7*.5	57.4	80.3	5C.7	57.4	90.9	3*C.3	227.7	12*.8	12C.2

CHLOROPHYTA

CHRYSOPHYTA

CYANOPHYTA

TOTAL DENSITY	75.5	57.4	80.3	50.7	57.4	90.9	350.3	227.7	128.8	126.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.469
VARIANCE = .0191
MAXIMUM INDEX = 3.664
EVENNESS = .401
NO OF SPECIES = 39

STATION ALPREP - 27
NUMBER OF REPETITIONS - 4
DATE - 042180

TAXON	DENSITY (UNITS/PM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	34.2	24.4	4.1	8.1	17.2	14.8
ACHNANTHES MINUTISSIMA	81.1	110.0	4.1	24.4	49.9	46.5
AMPHORA PERPUSILLA	.0	16.3	8.1	24.4	12.7	10.8
CALONEIS AMPHISBAENA	.0	8.1	.0	.0	1.5	3.1
COCCONEIS PLACENTULA	2.4	16.3	.0	30.8	12.8	14.3
CYMBELLA AFFINIS	7.3	.0	.0	.0	1.8	3.7
CYMBELLA MINUTA	4.9	12.2	.0	8.1	5.8	5.0
DIATOMA VULGARE	.0	.0	.0	12.2	3.1	6.1
EPITHEMIA SOREX	220.0	311.7	44.8	433.9	252.6	183.9
EPITHEMIA TURGIDA	7.3	.0	.0	.0	1.8	3.7
FRAGILARIA CAPUCINA	.0	12.2	.0	.0	3.1	6.1
FRAGILARIA LEPTOSTAURON	.0	8.1	.0	.0	1.5	3.1
FRAGILARIA VAUCHERIAE	14.7	.0	4.1	24.4	10.8	11.0
GOMPHONEMA OLIVACEUM	66.0	61.1	8.1	122.2	64.4	46.6
GOMPHONEMA PARVULUM	9.8	.0	.0	.0	2.4	4.9
NAVICULA CRYPTOCEPHALA	102.7	134.4	69.3	103.9	102.6	26.6
NAVICULA MEUELERI	.0	.0	.0	8.1	1.5	3.1
NAVICULA MINIMA	.0	.0	.0	8.1	1.5	3.1
NAVICULA PELLICULOSA	.0	.0	4.1	.0	1.0	2.0
NAVICULA RADIOSA	.0	.0	.0	8.1	1.5	3.1
NAVICULA RHYNCHOCEPHALA	9.8	.0	.0	12.2	5.5	6.4
NAVICULA SALINARUM VAR. INTERMEDIA	7.3	.0	.0	.0	1.8	3.7
NAVICULA SECRETA VAR. APICULATA	7.3	.0	16.3	.0	5.9	7.7
NAVICULA TRIPUNCTATA	.0	.0	8.1	.0	2.0	4.1
NAVICULA VIRIDULA	892.7	1509.4	.0	1423.9	956.4	693.8
NAVICULA VIRIDULA VAR. LINEARIS	.0	.0	.0	12.2	3.1	6.1
NITZSCHIA DISSIPATA	158.5	213.9	46.9	250.8	168.1	87.9
NITZSCHIA FONTICOLA	9.8	8.1	.0	.0	4.0	4.8
NITZSCHIA FRUSTULUM	2.4	16.3	8.1	16.3	11.8	7.9
NITZSCHIA LINEARIS	2.4	.0	.0	.0	.6	1.2
NITZSCHIA PALEA	14.7	16.3	.0	42.8	18.5	17.8
NITZSCHIA SP.	21.5	8.1	8.1	12.2	13.3	6.4
RHOICOSPHENIA CURVATA	68.0	24.4	.0	16.3	27.2	27.9
SURIRELLA OVATA	29.3	16.3	24.4	12.2	21.1	7.4
DIVISION TOTAL	1757.6	2530.0	260.7	2605.4	1788.4	1085.2

CHLOROPHYTA

CHRYSOPHYTA

CYANOPHYTA

PHORMIDIUM SP.	.0	18.3	.0	.0	4.6	9.2
DIVISION TOTAL	.0	18.3	.0	.0	4.6	9.2
TOTAL DENSITY	1757.6	2548.3	260.7	2609.4	1794.0	1093.3

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 3.788
VARIANCE = .0013
MAXIMUM INDEX = 3.555
EVENNESS = .902
NO OF SPECIES = 35

STATION NUMBER - 29
NUMBER OF REPETITIONS - 4
DATE - 042180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	6.1	.0	.0	.0	1.5	3.1
ACHNANTHES LANCEOLATA	24.4	24.4	3.1	6.1	15.0	11.1
ACHNANTHES MICROCEPHALA	6.1	6.1	.0	.0	3.1	3.5
ACHNANTHES MINUTISSIMA	281.1	116.1	58.1	220.0	168.8	100.5
AMPHORA PERPUSILLA	48.9	12.2	12.2	12.2	21.4	18.3
COCCONEIS PLACENTULA	30.6	110.0	3.1	28.5	43.0	46.4
CYCLOTELLA RODANICA	.0	.0	.0	4.1	1.0	2.0
CYMBELLA AFFINIS	.0	.0	.0	16.3	4.1	8.1
CYMBELLA MINUTA	36.7	6.1	3.1	8.1	13.5	15.6
CYMBELLA SINUATA	91.7	55.0	61.1	48.9	64.7	19.0
DENTICULA ELEGANS	.0	.0	.0	4.1	1.0	2.0
DIATOMA VULGARE	.0	6.1	.0	4.1	2.5	3.1
EPITHEMIA SOREX	.0	411.1	116.1	407.4	283.7	277.5
EPITHEMIA TURGIDA	.0	6.1	3.1	.0	2.3	2.9
FRAGILARIA CAPUCINA	12.2	36.7	6.1	.0	13.8	16.1
FRAGILARIA LEPTOSTAURON	.0	6.1	.0	8.1	3.6	4.2
FRAGILARIA PINNATA	.0	6.1	.0	.0	1.5	3.1
FRAGILARIA VAUCHERIAE	6.1	.0	.0	40.7	11.7	19.6
GOMPHONEIS HERCULEANA	.0	6.1	.0	.0	1.5	3.1
GOMPHONEMA DICHOTOMUM	.0	30.6	9.2	4.1	10.9	13.6
GOMPHONEMA INTRICATUM	.0	12.2	.0	.0	3.1	6.1
GOMPHONEMA OLIVACEUM	232.7	42.8	88.6	187.4	137.8	87.2
GOMPHONEMA PARVULUM	6.1	6.1	.0	.0	3.1	3.5
HANNAEA ARCUS	.0	6.1	.0	.0	1.5	3.1
NAVICULA AURICULATA	.0	.0	3.1	.0	.8	1.5
NAVICULA CINCTA	.0	12.2	3.1	.0	3.8	5.8
NAVICULA CRYPTOCEPHALA	67.2	.0	24.4	101.9	48.4	45.2
NAVICULA HEUFLERI	.0	.0	9.2	20.4	7.4	9.7
NAVICULA MINIMA	6.1	.0	.0	.0	1.5	3.1
NAVICULA PELLICULOSA	12.2	6.1	.0	.0	4.6	5.9
NAVICULA RADIOSA	6.1	.0	.0	.0	1.5	3.1
NAVICULA RHYNCHOCEPHALA	6.1	.0	.0	4.1	2.5	3.1
NAVICULA SALINARUM VAR. INTERMEDIA	.0	6.1	6.1	4.1	4.1	2.9
NAVICULA TRIPUNCTATA	.0	.0	.0	4.1	1.0	2.0
NAVICULA VIRIDULA	.0	476.7	305.6	741.5	380.9	316.9
NITZSCHIA DISSIPATA	305.6	67.2	214.5	423.7	253.4	151.2
NITZSCHIA FONTICOLA	91.7	6.1	6.1	6.1	27.0	43.1
NITZSCHIA FRUSTULUM	6.1	6.1	.0	.0	3.1	3.5
NITZSCHIA LINEARIS	.0	6.1	3.1	4.1	3.3	2.5
NITZSCHIA PALEA	12.2	18.3	61.1	81.5	43.3	33.5
NITZSCHIA SP.	.0	18.3	21.4	65.2	27.2	29.8
RHOICOSPHENIA CURVATA	24.4	6.1	.0	.0	7.6	11.8
RHOPALODIA MUSCULUS	.0	.0	3.1	.0	.8	1.5
SURIRELLA OVATA	18.3	12.2	9.2	12.2	13.0	3.8
DIVISION TOTAL	1330.3	1747.8	1035.8	2473.0	1646.7	622.1

CHLOROPHYTA

CHRYSOPHYTA

CYANOPHYTA

TOTAL DENSITY	1338.3	1747.8	1035.8	2473.0	1648.7	622.1

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.461
VARIANCE = .0008
MAXIMUM INDEX = 3.784
EVENNESS = .656
NO OF SPECIES = 44

MAY

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPETITIONS - 4
DATE - 051980

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	6.9	.0	.0	.0	1.7	3.5
ACHNANTHES LANCEOLATA	.0	15.3	6.9	.0	5.6	7.3
ACHNANTHES MINUTISSIMA	94.9	31.9	38.2	55.6	55.2	28.3
AMPHORA OVALIS	.0	7.8	.0	13.9	4.2	6.6
CYMBELLA CISTULA	.0	2.8	.0	.0	.7	1.4
CYMBELLA CYMBIFORMIS	.0	1.4	.0	.0	.3	.7
CYMBELLA MINUTA	.0	.0	.0	6.9	1.7	3.5
EPITHEMIA SOREX	.0	.0	6.9	.0	1.7	3.5
FRAGILARIA VAUCHERIAE	4.6	8.3	17.4	48.6	19.7	20.0
GOMPHONEMA PARVULUM	4.6	1.4	3.5	62.5	18.0	29.7
GYROSIGMA SPENCERII	.0	.0	.0	6.9	1.7	3.5
HANTZSCHIA AMPHIOXYS	2.3	.0	.0	6.9	2.3	3.3
MERIDION CIRCULARE	.0	.0	.0	6.9	1.7	3.5
NAVICULA MINIMA	.0	1.4	.0	6.9	2.1	3.3
NAVICULA SECRETA VAR. APICULATA	13.9	11.1	10.4	55.6	22.7	21.9
NAVICULA VIRIDULA	6.9	23.6	.0	.0	7.6	11.1
NITZSCHIA DENTICULA	.0	.0	6.9	.0	1.7	3.5
NITZSCHIA FONTICOLA	.0	2.8	3.5	13.9	5.0	6.1
NITZSCHIA FRUSTULUM	.0	1.4	.0	.0	.3	.7
NITZSCHIA LATENS	.0	1.4	.0	.0	.3	.7
NITZSCHIA LINEARIS	.0	.0	3.5	20.8	6.1	10.0
NITZSCHIA SP.	4.6	.0	.0	.0	1.2	2.3
PINNULARIA SP.	.0	.0	3.5	.0	.9	1.7
SURIRELLA OVALIS	2.3	.0	.0	13.9	4.1	6.6
SYNEDRA FASCICULATA	.0	4.2	.0	13.9	4.5	6.6
DIVISION TOTAL	141.2	104.7	100.7	333.3	171.2	109.4

CHLOROPHYTA						
CHRYSOPHYTA						
VAUCHERIA SP.	.0	11.1	.0	.0	2.8	5.6
DIVISION TOTAL	.0	11.1	.0	.0	2.8	5.6
CYANOPHYTA						
PHORMIDIUM SP.	44.3	4.2	.0	27.8	19.6	21.6
DIVISION TOTAL	44.3	4.2	.0	27.8	19.6	21.6
TOTAL DENSITY	187.5	125.0	100.7	361.1	193.6	117.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.504
VARIANCE = .0046
MAXIMUM INDEX = 3.296
EVENNESS = .760
NO OF SPECIES = 27

STATION NUMBER - 14
NUMBER OF REPETITIONS - 4
DATE - 051980

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	5.6	204.2	.0	4.2	53.5	100.5
ACHNANTHES EXIGUA	.0	.0	.0	1.4	.3	.7
ACHNANTHES LANCEOLATA	38.9	13.6	425.5	2.8	120.2	204.1
ACHNANTHES MICROCEPHALA	.0	.0	.0	4.2	1.0	2.1
ACHNANTHES MINUTISSIMA	44.4	1273.1	4690.7	180.6	1544.7	2161.8
CALONEIS AMPHISBAENA	.0	.0	85.1	.0	21.3	42.6
COCCONEIS PLACENTULA	.0	.0	85.1	.0	21.3	42.6
CYCLOTELLA MENEGHINIANA	.0	.0	170.2	.0	42.6	85.1
CYMBELLA MINUTA	.0	6.8	.0	2.8	2.4	3.2
DIATOMA TENUE VAR. ELONGATUM	5.6	6.8	255.3	.0	66.9	125.6
FRAGILARIA CAPUCINA	.0	13.6	.0	.0	3.4	6.8
FRAGILARIA CROTONENSIS	27.8	.0	.0	.0	6.9	13.9
FRAGILARIA VAUCHERIAE	8.3	81.7	85.1	.0	43.8	45.9
GOMPHONEMA ANGUSTATUM	.0	259.7	.0	.0	64.7	129.4
GOMPHONEMA PARVULUM	2.8	1143.8	.0	.0	286.6	571.4
GOMPHONEMA SUBCLAVATUM VAR. MEXICANU	.0	.0	85.1	.0	21.3	42.6
NAVICULA CUSPIDATA	.0	.0	170.2	.0	42.6	85.1
NAVICULA HEUFLERI	.0	.0	.0	4.2	1.0	2.1
NAVICULA MINIMA	2.8	.0	.0	.0	.7	1.4
NAVICULA MUTICA	.0	.0	.0	6.9	1.7	3.5
NAVICULA NOTHA	.0	.0	.0	2.8	.7	1.4
NAVICULA PELLICULOSA	16.7	34.0	2297.8	27.8	594.1	1135.8
NAVICULA SECRETA VAR. APICULATA	416.7	129.4	13191.0	58.3	3448.8	6496.6
NAVICULA VIRIDULA	.0	.0	.0	1.4	.3	.7
NITZSCHIA ACICULARIS	88.1	27.2	3319.0	2.8	858.8	1640.5
NITZSCHIA DENTICULA	11.1	.0	85.1	1.4	24.4	40.8
NITZSCHIA FONTICOLA	8.3	.0	170.2	.0	44.6	83.8
NITZSCHIA FRUSTULUM	8.3	.0	.0	4.2	3.1	4.0
NITZSCHIA LINEARIS	5.6	.0	425.5	1.4	108.1	211.6
PINNULARIA MAJOR	.0	.0	85.1	.0	21.3	42.6
PINNULARIA SP.	2.8	.0	.0	.0	.7	1.4
SURIRELLA ANGUSTATA	2.8	.0	.0	.0	.7	1.4
SURIRELLA OVATA	2.8	.0	.0	.0	.7	1.4
SYNEDRA ACUS	.0	54.5	.0	2.8	14.3	26.8
SYNEDRA FASCICULATA	.0	6.8	.0	.0	1.7	3.4
SYNEDRA MIRESCULA	5.6	40.8	.0	.0	11.6	19.7
SYNEDRA ULNA	19.7	.0	.0	.0	4.9	8.3
THALASSIOSIRA FLUVIATILIS	.0	.0	85.1	.0	21.3	42.6
DIVISION TOTAL	715.4	3295.2	29701.3	309.7	7505.4	12201.7

CHLOROPHYTA						
CLADOPHORA GLOMERATA	.0	.0	4680.7	.0	1170.2	2340.3
DIVISION TOTAL	.0	.0	4680.7	.0	1170.2	2340.3
CHRYSOPHYTA						
CYANOPHYTA						
TOTAL DENSITY	719.4	3295.2	30381.9	309.7	8676.6	14530.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.932
VARIANCE = .0002
MAXIMUM INDEX = 3.664
EVENNESS = .527
NO OF SPECIES = 39

STATION NUMBER - 20
NUMBER OF REPETITIONS - 4
DATE - 051580

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	1.0	.7	.0	.0	.4	.5
ACHNANTHES LANCEOLATA	2.1	11.1	1.4	8.8	5.8	4.8
ACHNANTHES MINUTISSIMA	1.0	6.3	126.9	4.2	34.6	61.6
COCCONEIS PLACENTULA	.3	.0	.5	.0	.2	.2
CYCLOTELLA MENEGHINIANA	1.0	2.1	.5	.5	1.0	.8
CYMBELLA CISTULA	.0	2.1	.0	.0	.5	1.0
CYMBELLA MINUTA	.0	1.4	.9	1.4	.9	.7
CYMBELLA MINUTA VAR. SILESIACA	.3	.0	.0	.0	.1	.2
DIATOMA VULGARE	.0	.0	.0	.5	.1	.2
ENTOMONEIS PALUDOSA	1.0	6.3	.5	.0	1.9	2.9
FRAGILARIA CAPUCINA	.0	.0	1.9	.0	.5	.9
FRAGILARIA VAUCHERIAE	34.7	70.8	4.6	52.3	40.6	28.2
GOMPHONEMA ANGUSTATUM	1.0	2.1	.0	.0	.8	1.
GOMPHONEMA OLIVACEUM	.0	.7	.0	.5	.3	.3
GOMPHONEMA PARVULUM	.0	.0	.0	1.9	.5	.9
NAVICULA HALOPHILA	1.4	.0	.0	.5	.5	.7
NAVICULA HEUFLERI	.0	.0	1.9	.5	.6	.9
NAVICULA PELLICULOSA	2.1	12.5	.0	.0	3.8	6.0
NAVICULA SECRETA VAR. APICULATA	8.3	7.6	1.9	1.9	4.9	3.6
NAVICULA VIRIDULA	.3	.7	.0	.0	.3	.3
NAVICULA SP.	.0	.7	.0	.0	.2	.3
NITZSCHIA ACICULARIS	.0	.0	.5	.9	.3	.4
NITZSCHIA FONTICOLA	3.8	9.0	.9	4.0	4.9	3.4
NITZSCHIA FRUSTULUM	.0	4.2	.0	.0	1.0	2.1
NITZSCHIA HOLSATICA	7.3	30.6	.0	.5	9.6	14.4
NITZSCHIA HUNGARICA	.0	.7	.0	.5	.3	.3
NITZSCHIA LATENS	1.0	.0	.0	.0	.3	.5
NITZSCHIA LINEARIS	.7	.7	.0	2.8	1.0	1.2
NITZSCHIA PALEA	1.4	2.8	.5	.9	1.4	1.0
PINNULARIA BREBISSONII	.7	1.4	.0	.0	.5	.7
PLEUROSIGMA DELICATISSIMA	.0	.7	.0	.0	.2	.3
SURIRELLA OVALIS	.0	1.4	.5	.5	.6	.6
SURIRELLA OVATA	19.4	43.1	6.0	13.9	20.6	16.0
SYNEDRA MINUSCULA	.0	4.9	1.9	.5	1.8	2.2
SYNEDRA PULCHELLA VAR. LANCEOLATA	.3	.0	.0	.0	.1	.2
UNIDENTIFIED PENNATE DIATOMS	.3	.0	.0	.0	.1	.2
DIVISION TOTAL	89.9	224.3	150.9	99.1	141.1	61.7

CHLOROPHYTA						
CHRYSOPHYTA						
CYANOPHYTA						
PHORMIDIUM SP.	.C	.0	.0	1.4	.3	.7
DIVISION TOTAL	.C	.0	.0	1.4	.3	.7
TOTAL DENSITY	[illegible]	224.3	150.9	100.5	141.4	61.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.239
VARIANCE = .0174
MAXIMUM INDEX = 3.611
EVENNESS = .620
NO OF SPECIES = 37

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES
REDOC AQUATIC SURVEYS
SAMPLE DATE: 0'1980

STATION NUMBER - 21
NUMBER OF REPLICATES - 4

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
CHRYSOPHYTA										
ACHNANTHES AFFINIS	.5	.2	.0	.5					.3	.2
ACHNANTHES LANCEOLATA	1.6	1.2	41.0	2.8					11.7	19.6
ACHNANTHES PERPUSILLA	.0	.5	78.9	.8					20.0	39.2
COCCONEIS PEDICULUS	.2	.0	.0	.0					.6	.1
CYCLOTELLA PSEUDOSTELLIGERA	.2	.3	22.1	.5					5.8	10.9
CYMBELLA PINNATA	.3	.0	.0	.0					.1	.2
CYMBELLA SINUATA	.0	.0	3.2	.0					.8	1.6
ENTOMONEIS PALUDOSA	1.2	.9	12.6	.0					3.7	6.0
EPITHEMIA SOREX	.2	.0	.0	.0					.0	.1
FRAGILARIA PINNATA	.0	.0	.0	.1					.0	.1
FRAGILARIA VAUCHERIAE	19.1	15.4	293.6	7.2					83.8	134.9
GOMPHONEMA ACUMINATUM	.5	.0	.0	.0					.1	.3
GOMPHONEMA PARVULUM	1.0	.6	.0	.2					.5	.5
GYROSIGMA SPENCERII	.0	.0	.0	.1					.0	.1
NAVICULA CINCTA	.0	.0	3.2	.0					.8	1.6
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.2	3.2	.3					.4	1.5
NAVICULA PEUPLEMI	.2	.5	.0	.1					.2	.2
NAVICULA PELLICULOSA	.9	.0	3.2	.0					1.0	1.5
NAVICULA PYGMAEA	.0	.2	.0	.0					.0	.1
NAVICULA SECRETA VAR. APICULATA	2.1	2.3	41.0	1.5					11.8	19.5
NAVICULA VIRIDULA	.0	.0	3.2	.0					.8	1.6
NAVICULA SP.	.0	.0	.0	.3					.1	.2
NITZSCHIA ACICULARIS	.2	.0	.0	.0					.0	.1
NITZSCHIA APICULATA	.0	.0	.0	.5					.1	.2
NITZSCHIA DISSIPATA	.0	.0	.0	.2					.1	.1
NITZSCHIA FONTICOLA	1.6	5.4	15.4	2.1					6.2	6.6
NITZSCHIA HELVETICA	.2	1.9	18.9	.7					5.4	9.0
NITZSCHIA HUNGERICA	.0	.0	3.2	.3					.9	1.5
NITZSCHIA LINEARIS	.9	1.2	18.9	.6					5.4	9.0
NITZSCHIA PALEA	.4	.0	.0	.0					.2	.4
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.3	.0	.3					.2	.2
NITZSCHIA SP.	.0	2.3	.0	.0					.6	1.7
PINNULARIA BOREALIS	.0	.0	.0	.1					.0	.1
PINNULARIA BORRISSOVII	.0	.2	3.2	.1					.9	1.5
PINNULARIA MAJOR	.0	.0	.0	.1					.3	.1
PLEUROSIGMA DELICATISSIMA	.0	.0	.0	.2					.1	.1
SURIRELLA OVATA	.0	.0	.0	.1					.3	.1
SYNEDRA ACUS VAR. LINEARIS	.0	.0	.0	.1					.0	.1
SYNEDRA CYATA	12.2	10.8	249.9	11.7					83.6	144.2
SYNEDRA MINUSCULA	.0	.2	3.2	.0					.8	1.6
SYNEDRA PULCHELLA	.3	.2	.0	.2					.2	.1
SYNEDRA ULNA	.0	.0	.0	.1					.0	.1
DIVISION TOTAL	44.1	44.6	868.1	32.4					247.3	

CHLOROPHYTA						
PICHOSPORA SP.	.4	3.1	9.5	.5	3.5	4.2
DIVISION TOTAL	.9	3.1	9.5	.5	3.5	
CYANOPHYTA						
PHORMIDIUM SP.	.0	.3	.0	.0	.1	.2
DIVISION TOTAL	.0	.3	.0	.0	.1	
EUGLENOPHYTA						
TOTAL DENSITY	45.0	48.0	877.5	32.9	250.8	

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.529
VARIANCE = .0072
MARGALEF INDEX = 3.784
EVENNESS = .510
NO OF SPECIES = 44

STATION NUMBER - 27
NUMBER OF REPETITIONS - 4
DATE - 051980

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	1.7	2.8	.0	.0	1.1	1.4
ACHNANTHES LANCEOLATA	1.7	1.4	.0	.0	1.	.0
ACHNANTHES MICROCEPHALA	.0	1.4	.0	.0	.3	.7
ACHNANTHES MINUTISSIMA	10.0	5.6	3.5	5.3	6.3	3.1
AMPHORA OVALIS	.3	.0	.0	.0	.1	.2
AMPHORA PERPUSILLA	10.4	12.5	6.9	.4	7.6	5.3
CALONEIS VENTRICOSA	.0	.0	3.5	.0	.9	1.7
COCCONEIS PEDICULUS	.0	.0	.0	.4	.1	.2
COCCONEIS PLACENTULA	1.7	0.3	13.9	.4	6.1	6.3
CYCLOTELLA MENEGHINIANA	.3	1.4	.0	.0	.4	.7
CYMBELLA AFFINIS	.3	.0	.0	.0	.1	.2
CYMBELLA MINUTA	1.4	.0	.0	1.5	.7	.0
CYMBELLA MINUTA VAR. SILESIACA	.3	1.4	.0	.0	.4	.7
CYMBELLA SINUATA	2.4	6.9	.0	2.3	2.9	2.9
DIATOMA VULGARE	1.4	1.4	.0	.0	.7	.0
EPITHEMIA SOREX	22.2	138.9	486.1	1.1	162.1	224.4
FRAGILARIA PINNATA	.0	1.4	.0	.0	.3	.7
FRAGILARIA VAUCHERIAE	22.9	10.7	.0	4.5	11.0	10.0
FRUSTULIA RHOMBOIDES	.0	.0	.0	.0	.2	.4
GOMPHONEMA ANGUSTATUM	.3	1.4	.0	.0	.4	.7
GOMPHONEMA INTRICATUM	.3	.0	0.9	.0	1.0	3.4
GOMPHONEMA OLIVACEUM	2.4	5.6	.0	12.4	5.1	5.4
GOMPHONEMA PARVULUM	1.4	.0	.0	.0	.3	.7
HANNAEA ARCUS	.7	.0	.0	.4	.3	.3
MERIDION CIRCULARE	.3	.0	.0	.0	.1	.2
NAVICULA CRYPTOCEPHALA	1.0	1.4	.0	.0	.6	.7
NAVICULA EXIGUA	.0	1.4	.0	.4	.4	.7
NAVICULA NOTHA	.0	45.0	13.9	.0	14.9	21.0

NAVICULA PELLICULOSA	.3	1.4	.0	.0	.4	.7
NAVICULA PYGMAEA	1.4	.0	10.4	.0	3.0	5.0
NAVICULA SALINARUM VAR. INTERMEDIA	.3	.0	.0	.0	.1	.2
NAVICULA SECRETA VAR. APICULATA	4.2	1.4	6.9	2.6	3.8	7.4
NAVICULA TRIPUNCTATA	2.4	8.3	.0	1.9	3.2	3.6
NAVICULA VIRIDULA	15.3	95.8	13.9	3.0	32.0	42.9
NAVICULA SP.	2.1	.0	.0	.4	.6	1.
NITZSCHIA ACICULARIS	.0	1.4	.0	.0	.3	.7
NITZSCHIA APICULATA	.7	.0	.0	.0	.2	.3
NITZSCHIA DISSIPATA	1.4	8.3	3.5	.0	3.3	3.6
NITZSCHIA FONTICOLA	15.3	4.2	.0	2.6	5.5	6.7
NITZSCHIA FRUSTULUM	.0	13.9	27.8	1.5	10.5	12.8
NITZSCHIA HOLSATICA	1.0	16.7	10.4	.0	7.0	8.0
NITZSCHIA LINEARIS	1.0	5.6	.0	.8	1.8	2.5
NITZSCHIA PALEA	1.7	13.9	.0	.0	3.9	6.7
PINNULARIA BREBISSONII	.0	.0	.0	.4	.1	.2
PINNULARIA MAIOR	.0	.0	.0	.4	.1	.2
PINNULARIA SP.	.3	.0	.0	.0	.1	.2
PLEUROSIGMA DELICATISSIMA	.0	.0	.0	.8	.2	.4
RHOICOSPHENIA CURVATA	.3	6.9	.0	.0	1.8	3.4
RHOPALODIA GIBBA	.0	.0	.0	.4	.1	.2
RHOPALODIA GIBBERULA	.7	1.4	.0	.4	.6	.6
STEPHANODISCUS HANTZSCHII	.3	.0	.0	.0	.1	.2
SURIRELLA OVALIS	.7	.0	.0	.0	.2	.3
SURIRELLA OVATA	3.1	.0	3.5	1.1	1.9	1.7
SYNEDRA MINUSCULA	.0	9.7	.0	.0	2.4	4.9
SYNEDRA ULNA	1.4	1.4	.0	1.1	1.	.7
UNIDENTIFIED PENNATE DIATOMS	.0	19.4	.0	.0	4.9	9.7
DIVISION TOTAL	138.9	465.3	611.1	48.0	315.8	266.2

CHLOROPHYTA						
MICROSPORA SP.	.0	.0	41.7	.0	10.4	20.8
SPIROGYRA SP.	.0	16.7	.0	.0	4.2	8.3
DIVISION TOTAL	.0	16.7	41.7	.0	14.6	19.7
CHRYSOPHYTA						
CYANOPHYTA						
OSCILLATORIA SP.	2.8	.0	.0	.0	.7	1.4
PHORMIDIUM SP.	34.7	58.3	20.8	7.5	30.3	21.7
DIVISION TOTAL	37.5	58.3	20.8	7.5	31.0	21.9
TOTAL DENSITY	176.4	540.3	673.6	55.6	361.5	297.8

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.460
VARIANCE = .0078
MAXIMUM INDEX = 4.094
EVENNESS = .598
NO OF SPECIES = 10

STATION NUMBER - 29
NUMBER OF REPETITIONS - 4
DATE - 051580

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	.3	.0	.0	.0	.1	.2
ACHNANTHES LANCEOLATA	.3	1.4	.7	.0	.6	.6
ACHNANTHES MINUTISSIMA	1.0	41.7	17.4	2.5	15.6	18.9
AMPHORA OVALIS	.0	.0	.0	.1	.0	.1
AMPHORA PERPUSILLA	10.4	166.7	1.0	2.0	45.2	81.1
COCCONEIS PLACENTULA	1.6	6.9	.3	.3	2.3	3.2
CYCLOTELLA PODANICA	.6	.0	.0	.7	.3	.4
CYCLOTELLA PENEGHINIANA	.0	.0	.2	.0	.0	.1
CYMBELLA AFFINIS	.1	.0	.0	.0	.0	.1
CYMBELLA MINUTA	.3	2.8	.0	1.1	1.1	1.2
CYMBELLA SINUATA	2.0	23.6	1.9	13.9	10.3	10.5
DENTICULA ELEGANS	.1	.0	.0	.0	.0	.1
DIATOMA HIEMALE VAR. MESODON	.1	.0	.2	.0	.1	.1
DIATOMA VULGARE	.2	.0	.0	.0	.1	.1
ENTOMONEIS PALUDOSA	.2	.0	.0	.0	.1	.1
EPITHEMIA SOREX	.1	1.4	.9	.3	.7	.6
FRAGILARIA LEPTOSTAURON	.0	.0	.2	.0	.0	.1
FRAGILARIA VAUCHERIAE	1.7	1.4	1.2	.6	1.2	.5
GOMPHONEMA ANGUSTATUM	.0	.0	.2	3.5	.6	1.7
GOMPHONEMA DICHOTOMUM	.0	.0	.0	.1	.0	.1
GOMPHONEMA INTRICATUM	.3	.0	.3	.0	.2	.2
GOMPHONEMA OLIVACEUM	4.3	48.6	1.0	2.2	14.0	23.1
HANNAEA ARCUS	.1	.0	.0	.0	.0	.1
MERIDION CIRCULARE	.1	.0	.0	.0	.0	.1
NAVICULA CRYPTOCEPHALA	.0	5.6	.3	.3	1.5	2.7
NAVICULA MEISTERI	.0	.0	.0	.3	.1	.1
NAVICULA NETHA	.2	6.9	.7	.0	2.0	3.3
NAVICULA PELLICULOSA	.2	4.2	.0	.1	1.1	2.0
NAVICULA PYGMAEA	.0	4.2	.0	.1	1.1	2.1
NAVICULA SECRETA VAR. APICULATA	.9	23.6	.7	.1	6.3	11.5
NAVICULA TRIPUNCTATA	.2	.0	.9	.0	.3	.4
NAVICULA VIRIDULA	.7	4.2	4.7	1.	2.6	2.1
NAVICULA SP.	.1	.0	.0	.0	.0	.1
NITZSCHIA ACICULARIS	.0	.0	.2	.0	.0	.1
NITZSCHIA APICULATA	.2	.0	.0	.0	.1	.1
NITZSCHIA DISSIPATA	.3	2.8	.2	.0	.8	1.3
NITZSCHIA FONTICOLA	.0	.0	.9	.7	.4	.5
NITZSCHIA FRUSTULUM	1.4	5.6	3.1	.7	2.7	2.2
NITZSCHIA PALEACEA	.1	.0	.0	.0	.0	.1
NITZSCHIA PUMICARIA	.0	.0	.2	.0	.0	.1
NITZSCHIA LINEARIS	1.3	.0	.3	.0	.4	.6
NITZSCHIA PALEA	.6	2.8	.7	.0	1.0	1.2
RHOICOSPHENIA CURVATA	.1	5.6	.3	.3	1.6	2.7
ROPALODIA GIBBA	.0	.0	.0	.1	.0	.1
SURIRELLA OVATA	.7	.0	.3	.7	.4	.3
SYNEDRA ULNA	.1	.0	.7	.0	.2	.3
UNIDENTIFIED PENNATE DIATOMS	.2	.0	.0	.1	.1	.1
DIVISION TOTAL	31.7	359.7	39.8	32.0	116.0	162.5

CHLOROPHYTA						
CHRYSOPHYTA						
CYANOPHYTA						
ANABAENA SP.	.0	1.4	.0	.0	.3	.7
PHORMIDIUM SP.	.5	.0	5.2	.0	1.4	2.5
DIVISION TOTAL	.5	1.4	5.2	.0	1.8	2.4
TOTAL DENSITY	32.2	361.1	45.0	32.4	117.7	162.4

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.291
VARIANCE = .0176
MAXIMUM INDEX = 3.892
EVENNESS = .589
NO OF SPECIES = 49

JUNE

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPETITIONS - 4
DATE - OCTOBER

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	.0	2.7	.0	.0	.7	1.4
ACHNANTHES LANCEOLATA	5.4	3.6	4.0	17.8	7.7	6.8
ACHNANTHES MINUTISSIMA	267.9	91.0	592.7	10.2	237.5	253.8
AMPHORA VENETA	.0	.0	.0	5.1	1.3	2.5
FRAGILARIA VAUCHERIAE	105.8	30.9	176.8	256.4	143.5	96.0
HANTZSCHIA AMPHIOXYS	2.7	.0	.0	.0	.7	1.3
MERIDION CIRCULARE	.0	.0	.0	7.6	1.9	3.8
NAVICULA ARVENSIS	.0	.9	4.0	.0	1.2	1.9
NAVICULA HALOPHILA	2.7	.0	.0	.0	.7	1.3
NAVICULA HEUFLERI	8.0	2.7	4.0	2.5	4.3	2.8
NAVICULA NOTHA	2.7	.0	.0	.0	.7	1.3
NAVICULA PELLICULOSA	.0	.0	16.1	7.6	5.9	7.7
NAVICULA SECRETA VAR. APICULATA	2.7	11.8	12.1	27.9	13.6	10.5
NITZSCHIA APICULATA	5.0	.0	.0	.0	2.0	4.0
NITZSCHIA FASCICULATA	.0	.9	.0	.0	.2	.5
NITZSCHIA FONTICOLA	18.8	1.8	404.3	55.8	142.7	235.5
NITZSCHIA FRUSTULUM	.0	29.1	4.0	2.5	8.9	13.6
NITZSCHIA PALEA	5.0	.0	.0	.0	2.0	4.0
RHOPALODIA MUSCULUS	.0	10.0	.0	.0	2.5	5.0
SURIRELLA OVATA	10.7	.0	.0	10.2	5.2	6.0
DIVISION TOTAL	447.4	185.6	1298.1	403.4	583.7	484.8
CHLOROPHYTA						
PALMELLA STAGE OF CHAETOPHORACEAE	.0	27.3	.0	.0	6.8	13.6
DIVISION TOTAL	.0	27.3	.0	.0	6.8	13.6

TOTAL DENSITY	447.4	212.9	1298.1	403.6	550.5	492.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.576

VARIANCE = .0022
MAXIMUM INDEX = 3.045
EVENNESS = .518
NO OF SPECIES = 21

STATION NUMBER - 14
NUMBER OF REPETITIONS - 4
DATE - 08168C

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	.0	28.4	285.0	64.3	94.4	129.7
ACHNANTHES LANCEOLATA	155.4	68.1	43.8	25.7	73.3	57.4
ACHNANTHES MICROCEPHALA	.0	11.3	.0	.0	2.8	5.7
ACHNANTHES MINUTISSIMA	69.7	709.2	.0	.0	194.7	344.6
AMPHORA OVALIS	10.7	11.3	.0	.0	5.5	6.4
COCCONEIS PLACENTULA	10.7	5.7	4.4	.0	5.2	4.4
CYCLOTELLA MENEGHINIANA	.0	5.7	.0	.0	1.4	2.8
CYMBELLA CYMBIFORMIS VAR. NONPUNCTAT	.0	5.7	.0	.0	1.4	2.8
CYMBELLA MINUTA VAR. SILESIACA	10.7	.0	8.8	.0	4.9	5.7
DIATOMA TENUE VAR. ELONGATUM	.0	.0	17.5	.0	4.4	8.8
FRAGILARIA CROTONENSIS	.0	.0	.0	38.6	9.6	19.3
FRAGILARIA VAUCHERIAE	112.5	.0	276.2	98.5	121.3	114.6
GOMPHONEMA ANGUSTATUM	.0	.0	.0	6.4	1.6	3.2
MERIDION CIRCULARE	.0	.0	17.5	19.3	9.2	10.7
NAVICULA ARVENSIS	.0	.0	4.4	.0	1.1	2.2
NAVICULA CRYPTOCEPHALA	.0	.0	.0	6.4	1.6	3.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	68.1	4.4	.0	18.1	33.4
NAVICULA MEUFLERI	42.9	5.7	8.8	6.4	15.9	18.0
NAVICULA MINIMA	.0	5.7	4.4	19.3	7.3	8.3
NAVICULA SECRETA VAR. APICULATA	541.2	612.7	438.4	643.0	558.8	90.9
NAVICULA SIMPLEX	.0	5.7	.0	.0	1.4	2.8
NAVICULA VIRIDULA	.0	5.7	4.4	.0	2.5	3.0
NITZSCHIA ACICULARIS	5.4	5.7	4.4	25.7	10.3	10.3
NITZSCHIA DENTICULA	.0	.0	4.4	.0	1.1	2.2
NITZSCHIA FONTICOLA	48.2	.0	.0	.0	12.1	24.1
NITZSCHIA FRUSTULUM	26.8	22.7	52.6	90.0	48.0	31.0
NITZSCHIA LINEARIS	5.4	5.7	17.5	6.4	8.7	5.9
NITZSCHIA PALEA	.0	.0	8.8	12.9	5.4	6.5
PINNULARIA BREBISSONII	.0	17.0	17.5	19.3	13.5	9.0
RHOPALODIA MUSCULUS	.0	11.3	.0	.0	2.8	5.7
SURIRELLA OVATA	.0	.0	4.4	.0	1.1	2.2
SYNEDRA ACUS	.0	.0	26.3	.0	6.6	13.2
SYNEDRA FASCICULATA	.0	73.8	.0	.0	18.4	36.9
SYNEDRA MINUSCULA	42.9	51.1	8.8	.0	25.7	23.1
SYNEDRA ULNA	.0	.0	8.8	.0	2.2	4.4
DIVISION TOTAL	1062.6	1736.1	1271.4	1048.2	1292.5	309.0

CYANOPHYTA						
PHORMIDIUM SP.	.0	.0	.0	19.3	4.8	9.6
DIVISION TOTAL	.0	.0	.0	19.3	4.8	9.6
TOTAL DENSITY	1062.4	1736.1	1271.4	1099.5	1297.4	304.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.122
VARIANCE = .0016
MAXIMUM INDEX = 3.584
EVENNESS = .592
NO OF SPECIES = 36

STATION NUMBER - 20
NUMBER OF REPLICATES - 8
DATE - 061680

TAXON	REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
	DENSITY (UNITS/MM2)									
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	.0	77.2	.0	.0	1787.6	43.8	92.9	.0	250.7	622.3
ACHNANTHES HAUCKIANA	.0	11.0	.0	.0	.0	.0	.0	1.4	1.4	3.9
ACHNANTHES HAUCKIANA VAR. ROSTRATA	.0	77.2	22.0	.0	.0	.0	.0	.0	12.4	27.3
ACHNANTHES LANCEOLATA	.0	231.5	11.0	179.1	.0	.0	.0	.0	52.7	95.3
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	.0	.0	424.4	911.9	10.5	552.4	237.4	351.7
ACHNANTHES MINUTISSIMA	32.2	.0	.0	55.1	.0	.0	.0	.0	10.9	21.1
CYCLOTELLA MENEGHINIANA	107.2	220.5	88.2	137.8	282.9	526.1	24.8	248.5	204.3	156.5
CYMBELLA MINUTA	.0	.0	.0	.0	.0	.0	.0	8.8	1.1	3.1
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	41.3	12.9	.0	.0	.0	6.8	14.7
ENTOMONEIS PALUDOSA	.0	11.0	.0	.0	.0	1.8	8.8	8.8	2.7	4.5
FRAGILARIA VAUCHERIAE	.0	220.5	.0	.0	115.7	140.3	1.8	8.8	60.9	84.3
NAVICULA CRYPTOCEPHALA	.0	.0	22.0	.0	.0	.0	.0	35.1	7.1	13.7
NAVICULA HALOPHILA	.0	.0	.0	.0	12.9	.0	1.8	.0	1.8	4.5
NAVICULA MEUFLERI	10.7	.0	.0	.0	.0	.0	.0	8.8	2.4	4.5
NAVICULA MINIMA	.0	.0	.0	.0	.0	.0	.0	8.8	1.1	3.1
NAVICULA SALINARUM	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
NAVICULA SECRETA VAR. APICULATA	21.4	55.1	66.1	27.6	12.9	8.8	.0	.0	24.0	24.7
NAVICULA SIMPLEX	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
NAVICULA VIRIDULA	.0	.0	.0	13.8	.0	.0	.0	.0	1.7	4.9
NAVICULA VIRIDULA VAR. AVENACEA	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
NITZSCHIA COMMUNIS	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
NITZSCHIA FONTICOLA	53.6	.0	44.1	206.7	797.3	.0	.0	.0	137.7	275.6
NITZSCHIA FRUSTULUM	42.9	55.1	110.2	.0	.0	184.1	1.8	131.5	65.7	69.4
NITZSCHIA HUNGARICA	32.2	.0	22.0	.0	.0	.0	.0	.0	8.8	12.8
NITZSCHIA LATENS	.0	.0	44.1	.0	.0	.0	.0	.0	5.5	15.6
NITZSCHIA LINEARIS	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
SURIRELLA OVALIS	.0	.0	.0	.0	.0	.0	.0	26.3	3.3	9.3
SURIRELLA OVATA	53.6	77.2	22.0	27.6	64.3	157.8	3.5	35.1	55.1	47.5
SYNEDRA PINNUSCULA	.0	.0	11.0	.0	.0	.0	.0	.0	1.4	3.9
DIVISION TOTAL	407.2	1036.2	463.0	698.5	3510.8	1972.9	138.5	1065.7	1160.9	1103.8
CHLOROPHYTA										
BULBOCHAETA SP.	1211.0	1223.5	1113.3	1405.4	295.8	555.7	175.4	894.4	909.3	446.4
DIVISION TOTAL	1211.0	1223.5	1113.3	1405.4	295.8	555.7	175.4	894.4	909.3	446.4

TOTAL DENSITY	1618.2	2259.7	1576.3	2094.4	3606.6	2928.6	313.5	1964.1	2070.2	1023.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.940
VARIANCE = .0008
MAXIMUM INDEX = 3.401
EVENNESS = .570
NO OF SPECIES = 30

STATION NUMBER - 21
NUMBER OF REPITITIONS - 8
DATE - 061680

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	.0	48.2	.0	6.1	46.8	.0	48.2	.0	18.7	24.2
ACHNANTHES LANCEOLATA	.0	.0	.0	6.1	.0	5.4	.0	7.1	2.3	3.2
ACHNANTHES LANCEOLATA VAR. DUBIA	385.8	96.5	9.7	.0	3.9	.0	.0	7.1	62.9	134.5
ACHNANTHES MINUTISSIMA	.0	.0	29.2	.0	.0	.0	.0	.0	3.7	10.3
CYCLOTELLA MENEGHINIANA	203.6	241.1	258.2	171.5	171.5	342.9	305.4	250.1	243.0	60.9
CYMBELLA MINUTA	10.7	.0	.0	.0	.0	.0	.0	.0	1.3	3.8
ENTOMONEIS PALUDOSA	.0	.0	.0	.0	.0	.0	24.1	7.1	3.9	8.5
EPITHEMIA SOREX	.0	.0	.0	.0	3.9	.0	.0	.0	.5	1.4
FRAGILARIA VAUCHERIAE	21.4	60.3	24.4	42.9	89.6	37.5	72.3	64.3	51.6	24.0
NAVICULA CRYPTOCEPHALA	.0	.0	14.6	.0	3.9	.0	.0	.0	2.3	5.2
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	24.1	.0	.0	.0	.0	24.1	.0	6.0	11.2
NAVICULA SECRETA VAR. APICULATA	10.7	36.2	24.4	18.4	3.9	42.9	.0	21.4	19.7	14.9
NAVICULA VIRIDULA	.0	.0	.0	12.2	7.8	.0	.0	7.1	3.4	4.9
NITZSCHIA ACICULARIS	.0	.0	.0	6.1	.0	.0	.0	.0	.8	2.2
NITZSCHIA DENTICULA	.0	.0	.0	.0	7.8	.0	.0	.0	1.	2.8
NITZSCHIA DISSIPATA	.0	.0	.0	.0	.0	5.4	.0	.0	.7	1.9
NITZSCHIA FONTICOLA	.0	.0	73.1	.0	7.8	.0	.0	150.0	28.9	55.1
NITZSCHIA FRUSTULUM	439.4	289.4	.0	.0	.0	58.9	24.1	64.3	109.5	164.3
NITZSCHIA HUNGARICA	53.6	.0	.0	.0	.0	.0	.0	.0	6.7	18.9
NITZSCHIA PALEA	.0	12.1	.0	.0	.0	5.4	24.1	28.6	8.8	11.7
NITZSCHIA ROMANA	.0	.0	.0	.0	.0	5.4	.0	.0	.7	1.9
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	.0	.0	.0	.0	8.0	.0	1.0	2.8
NITZSCHIA SP.	.0	.0	.0	.0	.0	.0	.0	7.1	.9	2.5
PINNULARIA BREBISSONII	.0	.0	.0	.0	.0	5.4	.0	.0	.7	1.9
SURIRELLA LINEARIS	.0	.0	.0	.0	.0	5.4	.0	.0	.7	1.9
SURIRELLA OVALIS	21.4	.0	.0	.0	.0	.0	8.0	.0	3.7	7.7
SURIRELLA OVATA	192.9	217.0	58.5	73.5	19.5	26.8	.0	85.7	84.2	80.0
SYNEDRA PULCHELLA VAR. LANCEOLATA	.0	.0	.0	.0	3.9	.0	.0	.0	.5	1.4
DIVISION TOTAL	1339.6	1024.8	492.0	336.8	370.2	541.2	538.5	700.2	667.9	346.7
CHLOROPHYTA										
BULBOCHAETA SP.	1082.4	1229.7	487.1	765.5	401.4	600.1	884.1	757.3	776.0	284.5
DIVISION TOTAL	1082.4	1229.7	487.1	765.5	401.4	600.1	884.1	757.3	776.0	284.5

TOTAL DENSITY	2422.0	2254.5	979.1	1102.3	771.6	1141.3	1422.6	1457.5	1443.9	596.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.648
VARIANCE = .0013
MAXIMUM INDEX = 3.367
EVENNESS = .490
NO OF SPECIES = 29

JULY

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPETITIONS - 4
DATE - 07210C

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	334.4	567.4	876.8	492.1	567.7	227.8
ACHNANTHES LANCEOLATA	8.4	.0	26.3	.0	8.2	12.5
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	8.8	.0	2.2	4.4
AMPHORA OVALIS VAR. AFFINIS	.0	.0	17.5	.0	4.4	8.8
CALONEIS AMPHISBAENA	.0	.0	43.8	.0	11.0	21.9
CYCLOTELLA MENEGHINIANA	.0	5.7	52.6	.0	14.6	25.5
CYMBELLA CISTULA	.0	.0	8.8	.0	2.2	4.4
CYMBELLA MINUTA	32.2	124.8	17.5	14.8	47.3	52.2
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	8.8	.0	2.2	4.4
DENTICULA ELEGANS	.0	.0	52.6	.0	13.2	26.3
DIATOMA TENUE VAR. ELONGATUM	.0	.0	70.1	.0	17.5	35.1
FRAGILARIA CAPUCINA	.0	.0	43.8	.0	11.0	21.9
FRAGILARIA CROTONENSIS	.0	.0	254.3	.0	63.6	127.1
FRAGILARIA VAUCHERIAE	334.4	204.2	254.3	14.8	201.9	135.8
GOMPHONEMA PARVULUM	.0	.0	8.8	.0	2.2	4.4
GYROSIGMA SPENCERII	.0	5.7	.0	.0	1.4	2.8
MELOSIRA VARIANS	32.2	.0	.0	.0	8.0	16.1
PERIDICA CIRCULARE	25.7	11.3	.0	.0	9.3	12.2
NAVICULA ARVENSIS	8.4	.0	.0	.0	1.6	3.2
NAVICULA HALOPHILA	.0	5.7	70.1	.0	19.0	34.7
NAVICULA PFUEHLERI	.0	5.7	35.1	.0	10.2	16.8
NAVICULA PELLICULOSA	.0	5.7	.0	.0	1.4	2.8
NAVICULA SECRETA VAR. APICULATA	12.9	17.0	219.2	.0	62.3	104.9
NAVICULA VIRIDULA VAR. AVENACEA	.0	11.3	.0	4.9	4.1	5.4
NITZSCHIA ACICULARIS	8.4	.0	.0	.0	1.6	3.2
NITZSCHIA APICULATA	.0	5.7	17.5	.0	5.8	8.3
NITZSCHIA DENTICULA	8.4	5.7	.0	.0	3.0	3.5
NITZSCHIA FRUSTULUM	.0	5.7	8.8	9.8	6.1	4.4
NITZSCHIA LINEARIS	12.9	17.0	.0	.0	7.5	8.8
PINNULARIA BRERISSONII	.0	.0	8.8	.0	2.2	4.4
PINNULARIA SP.	.0	.0	8.8	.0	2.2	4.4
SURIRELLA OVALIS	.0	.0	26.3	4.9	7.8	12.5
SURIRELLA OVATA	.0	22.7	.0	.0	5.7	11.3
SYNEDRA ACUS	.0	.0	17.5	.0	4.4	8.8
SYNEDRA FASCICULATA	.0	.0	8.8	.0	2.2	4.4
SYNEDRA MINUSCULA	.0	.0	43.8	.0	11.0	21.9
SYNEDRA ULNA	.0	5.7	.0	.0	1.4	2.8
SYNEDRA SP.	.0	.0	298.6	9.8	74.8	143.1
UNIDENTIFIED PENNATE DIATOMS	.0	34.0	52.6	.0	21.7	26.1
DIVISION TOTAL	810.2	1061.0	2351.6	551.1	1243.5	896.6

CHLOROPHYTA						
CLADOPHORA SP.	643.0	442.5	.0	.0	271.4	323.9
DIVISION TOTAL	643.0	442.5	.0	.0	271.4	323.9
TOTAL DENSITY	1452.7	1503.5	2591.6	991.1	1514.8	816.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.227
VARIANCE = .0014
MAXIMUM INDEX = 3.689
EVENNESS = .604
NO OF SPECIES = 40

STATION NUMBER - 14
NUMBER OF REPETITIONS - 4
DATE - 072180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	771.4	.0	306.2	146.1	306.0	334.7
ACHNANTHES LANCEOLATA	7.4	69.9	.0	48.7	31.5	33.4
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	117.4	19.5	34.2	56.2
ACHNANTHES MICROCEPHALA	.0	.0	40.8	.0	10.2	20.4
ACHNANTHES MINUTISSIMA	.0	657.0	510.3	385.7	389.3	281.6
CALONEIS AMPHISBAENA	.0	.0	5.1	.0	1.3	2.6
COCCONEIS PEDICULUS	.0	14.0	15.3	.0	7.3	8.5
COCCONEIS PLACENTULA	.0	14.0	.0	.0	3.5	7.0
CYCLOTELLA MENEGHINIANA	.0	125.8	71.4	29.2	56.6	54.7
CYMBELLA CYMBIFORMIS VAR. NONPUNCTAT	.0	.0	.0	9.7	2.4	4.9
CYMBELLA MINUTA	94.5	.0	.0	39.0	33.5	45.6
CYMBELLA MINUTA VAR. SILESIACA	.0	251.6	20.4	.0	68.0	122.8
CYMBELLA SINUATA	.0	14.0	.0	.0	3.5	7.0
DENTICULA ELEGANS	.0	14.0	.0	9.7	5.9	7.1
DIATOMA TENUE VAR. ELONGATUM	.0	139.8	173.5	136.4	112.4	76.8
DIATOMA VULGARE	.0	139.8	.0	.0	34.9	69.9
EPITHEMIA SOREX	.0	237.6	.0	.0	59.4	118.8
FRAGILARIA CAPUCINA	.0	.0	81.7	39.0	30.2	38.9
FRAGILARIA CROTONENSIS	.0	798.8	520.5	584.5	475.5	338.2
FRAGILARIA VAUCHERIAE	356.1	1397.8	173.5	116.9	511.1	599.9
GOMPHONEMA GRACILE	.0	.0	5.1	.0	1.3	2.6
GOMPHONEMA PARVULUM	7.4	14.0	5.1	.0	6.6	5.8
GYROSIGMA SPENCERII	7.4	14.0	.0	.0	5.3	6.7
NANTZSCHIA AMPHIOXYS	.0	.0	.0	9.7	2.4	4.9
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	14.0	.0	.0	3.5	7.0
NAVICULA CUSPIDATA	.0	.0	5.1	.0	1.3	2.6
NAVICULA EXIGUA	.0	14.0	.0	.0	3.5	7.0
NAVICULA HALOPHILA	22.3	55.9	158.2	.0	59.1	70.0
NAVICULA MEUFLERI	.0	55.9	66.3	48.7	42.7	29.4
NAVICULA MINIMA	.0	14.0	.0	.0	3.5	7.0
NAVICULA SECRETA VAR. APICULATA	22.3	419.4	377.6	974.2	448.4	393.3
NAVICULA VIRIDULA	.0	14.0	.0	.0	3.5	7.0
NITZSCHIA ACICULARIS	14.8	14.0	25.5	.0	13.6	10.5
NITZSCHIA COMMUNIS	.0	.0	5.1	.0	1.3	2.6
NITZSCHIA FRUSTULUM	14.8	223.7	66.3	29.2	83.5	95.9
NITZSCHIA HUNGARICA	.0	.0	5.1	.0	1.3	2.6
NITZSCHIA LINEARIS	14.8	41.9	30.6	58.5	36.5	18.4
NITZSCHIA PALEA	7.4	.0	.0	9.7	4.3	5.0
RHOICOSPHENIA CURVATA	.0	139.8	.0	.0	34.9	69.9
RHOPALODIA GIBBERULA	7.4	.0	.0	.0	1.9	3.7
SURIRELLA OVALIS	7.4	.0	.0	.0	1.9	3.7
SURIRELLA OVATA	44.5	.0	.0	.0	11.1	22.3
SYNEDRA ACUS	22.3	65.9	122.5	77.9	73.1	41.1
SYNEDRA FASCICULATA	44.5	195.7	117.4	29.2	96.7	76.4
SYNEDRA PULCHELLA	.0	55.9	56.1	39.0	37.0	27.4
THALASSIOSIRA FLUVIATILIS	.0	55.9	56.1	97.4	52.4	41.0
UNIDENTIFIED PENNATE DIATOMS	.0	167.7	.0	.0	41.9	83.9
DIVISION TOTAL	1495.0	5451.6	3138.5	2942.2	3256.3	1645.8

CHLOROPHYTA						
MICROSPORA SP.	51.9	.0	.0	.0	13.0	26.0
STIGEOCLONIUM TENUE	.0	41.9	.0	.0	10.5	21.0
DIVISION TOTAL	51.9	41.9	.0	.0	23.5	27.4
CHRYSOPHYTA						
VAUCHERIA SP.	118.7	.0	.0	.0	29.7	59.4
DIVISION TOTAL	118.7	.0	.0	.0	29.7	59.4
CYANOPHYTA						
PHORMIDIUM SP.	.0	28.0	.0	.0	7.0	14.0
DIVISION TOTAL	.0	28.0	.0	.0	7.0	14.0
TOTAL DENSITY	1439.7	9521.4	3138.5	2942.2	3310.5	1617.1

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.842
VARIANCE = .0034
MAXIMUM INDEX = 3.932
EVENNESS = .723

NO OF SPECIES = 51

STATION NUMBER - 20
NUMBER OF REPETITIONS - 8
DATE - 072180

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	67.2	1181.0	295.1	1736.1	2121.9	496.7	578.7	454.7	866.4	735.4
ACHNANTHES LANCEOLATA	.0	.0	.0	.0	32.2	.0	.0	.0	4.0	11.4
ACHNANTHES LANCEOLATA VAR. DUBIA	3.7	.0	.0	.0	.0	4.8	17.4	82.7	13.8	28.5
ACHNANTHES SP.	.0	.0	43.4	.0	64.3	.0	.0	.0	13.5	25.5
AMPHORA OVALIS	1.9	.0	.0	.0	.0	.0	5.8	.0	1.	2.1
CYCLOTELLA MENEGHINIANA	42.9	153.5	347.2	992.1	1157.4	135.0	405.1	316.5	443.8	410.1
CYMBELLA MINUTA	.0	.0	.0	.0	.0	9.6	.0	.0	1.2	3.4
ENTOMONEIS PALUDOSA	.0	.0	8.7	.0	32.2	.0	5.8	.0	5.4	11.2
EPITHEMIA SOREX	1.9	.0	.0	.0	.0	.0	.0	.0	.2	.7
FRAGILARIA VAUCHERIAE	.0	.0	173.6	.0	.0	.0	.0	.0	21.7	61.4
GOMPHONEMA GRACILE	1.9	35.4	34.7	.0	32.2	14.5	11.6	27.6	19.7	14.6
GOMPHONEMA PARVULUM	.0	.0	.0	.0	32.2	.0	.0	.0	4.0	11.4
NAVICULA CINCTA VAR. ROSTRATA	1.9	.0	.0	.0	.0	.0	.0	.0	.2	.7
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	.0	64.3	.0	5.8	.0	8.8	22.5
NAVICULA CESPIDATA	1.9	.0	.0	.0	.0	.0	.0	.0	.2	.7
NAVICULA HALOPHILA	.0	.0	8.7	.0	.0	9.6	.0	.0	2.3	4.2
NAVICULA SALINARUM	.0	.0	.0	248.0	.0	.0	.0	.0	31.0	87.7
NAVICULA SECRETA VAR. APICULATA	.0	.0	.0	.0	.0	4.8	28.9	27.6	7.7	12.8
NAVICULA VIRIDULA	.0	.0	34.7	.0	.0	.0	.0	.0	4.3	12.3
NAVICULA VIRIDULA VAR. AVENACEA	1.9	.0	.0	.0	.0	4.8	.0	.0	.8	1.7
NITZSCHIA APICULATA	1.9	.0	.0	.0	.0	.0	.0	.0	.2	.7
NITZSCHIA DENTICULA	.0	.0	.0	165.3	.0	.0	.0	.0	20.7	58.5
NITZSCHIA FRUSTULUM	.0	11.8	.0	.0	.0	28.9	23.1	27.6	11.4	13.2
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	1.9	.0	.0	.0	.0	.0	.0	.0	.2	.7
SURIRELLA OVALIS	1.9	11.8	17.4	.0	.0	4.8	11.6	13.8	7.7	6.8
SURIRELLA OVATA	1.9	.0	.0	.0	.0	.0	.0	13.8	2.0	4.8
SYNEDRA PULCHELLA VAR. LANCEOLATA	131.7	82.7	269.1	330.7	1093.1	183.3	225.7	446.9	344.5	322.9
DIVISION TOTAL	263.2	1476.3	1232.4	3472.2	4629.6	897.0	1319.4	1465.4	1827.0	1453.2

CHLOROPHYTA										
AULACOSEIRA SP.	184.7	236.2	868.1	8680.6	1286.0	.0	24.7	1377.9	1583.8	2920.0
CLADOPHORA SP.	31.7	.0	347.2	.0	3311.5	217.0	23.1	.0	491.3	1146.7
DIVISION TOTAL	216.4	236.2	1215.3	8680.6	4597.5	217.0	57.9	1377.9	2075.1	3066.6
TOTAL DENSITY	481.4	1712.9	2447.9	12152.8	9227.1	1114.0	1377.3	2783.3	3912.1	4316.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.696
VARIANCE = .0103
MAXIMUM INDEX = 3.367
EVENNESS = .501
NO OF SPECIES = 29

STATION NUMBER - 21
NUMBER OF REPLICATES - 8
DATE - C721RC

TAXON	REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
	DENSITY (UNITS/MM2)									
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	260.4	578.7	694.4	7233.8	655.9	390.6	144.7	151.5	1263.8	2422.0
ACHNANTHES LANCEOLATA	.0	.0	.0	.0	77.2	.0	.0	.0	9.6	27.3
ACHNANTHES LANCEOLATA VAR. DUBIA	37.2	86.8	.0	.0	.0	.0	.0	7.2	16.4	31.2
ACHNANTHES LINEARIS	.0	28.9	.0	.0	.0	.0	.0	.0	3.6	10.2
AMPHORA PERPUSILLA	.0	.0	.0	.0	.0	10.9	.0	.0	1.4	3.8
CYCLOTELLA MENEGHINIANA	520.8	1388.9	789.1	1302.1	810.2	325.5	303.6	311.1	718.9	434.7
ENTOMONEIS PALUDOSA	.0	28.9	.0	.0	.0	.0	14.5	.0	5.4	10.8
FRAGILARIA VAUCHERIAE	.0	.0	.0	.0	115.7	.0	.0	.0	14.5	40.9
GOMPHONEMA GRACILE	24.8	.0	94.7	.0	38.6	.0	28.9	7.2	24.3	32.2
GOMPHONEMA PARVULUM	12.4	.0	.0	72.3	.0	.0	14.5	.0	12.4	25.0
NAVICULA CINCTA VAR. ROSTRATA	.0	.0	.0	.0	38.6	.0	14.5	7.2	7.5	13.6
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	28.9	.0	72.3	.0	.0	.0	.0	12.7	26.2
NAVICULA MEUFLERI	.0	.0	63.1	.0	.0	.0	.0	.0	7.9	22.3
NAVICULA RADIOSA	.0	.0	.0	.0	.0	.0	.0	7.2	.9	2.6
NAVICULA SALINARUM	.0	.0	.0	.0	38.6	.0	14.5	.0	6.8	13.9
NAVICULA SECRETA VAR. APICULATA	.0	28.9	.0	.0	.0	.0	.0	.0	3.6	10.2
NAVICULA VIRIDULA VAR. AVENACEA	.0	.0	.0	.0	.0	.0	14.5	7.2	2.7	5.4
NITZSCHIA APICULATA	12.4	.0	.0	.0	.0	.0	.0	7.2	2.5	4.7
NITZSCHIA PUSTULUM	.0	57.9	31.6	.0	.0	.0	14.5	7.2	13.9	20.9
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	63.1	.0	.0	.0	.0	.0	7.9	22.3
SURIRELLA OVALIS	12.4	28.9	31.6	.0	.0	.0	.0	.0	9.1	13.7
SURIRELLA OVATA	.0	.0	.0	.0	.0	10.9	.0	21.7	4.1	8.1
SYNEDRA PULCHELLA VAR. LANCEOLATA	372.0	839.1	2463.7	578.7	.0	97.7	86.8	571.5	629.9	807.6
DIVISION TOTAL	1252.5	3096.1	4261.4	9259.3	1774.7	835.5	651.0	1106.8	2779.6	2896.6
CHLOROPHYTA										
BULBOCHAETA SP.	1255.7	2980.3	3977.3	8029.5	3698.6	1291.2	1504.6	752.3	2965.2	2395.8
CLADOPHORA SP.	86.8	549.8	831.3	.0	.0	.0	72.3	245.6	198.3	258.2
DIVISION TOTAL	1342.5	3530.1	4808.6	8029.5	3698.6	1291.2	1577.0	998.3	3163.5	2400.7

TOTAL DENSITY	2629.0	6626.2	8869.9	17288.8	5671.3	2126.7	2229.6	2105.6	5943.1	5236.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.461
VARIANCE = .0002
MAXIMUM INDEX = 3.219
EVENNESS = .454
NO OF SPECIES = 29

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4
DATE - 072280

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA	.0	.0	.0	16.1	4.0	8.0
ACHNANTHES MINUTISSIMA	540.1	111.8	71.4	64.3	196.9	229.8
AMPHIPLEURA PELLUCIDA	.0	.0	.0	16.1	4.0	8.0
AMPHORA PERPUSILLA	192.9	.0	83.4	.0	69.1	91.4
COCCONEIS PEDICULUS	.0	28.0	.0	.0	7.0	14.0
COCCONEIS PLACENTULA	77.2	167.7	154.8	160.6	140.1	42.3
CYMBELLA MINUTA	115.7	.0	.0	.0	28.9	57.9
CYMBELLA MINUTA VAR. SILESIACA	192.9	223.7	35.7	112.5	141.2	84.5
CYMBELLA SINUATA	.0	.0	47.6	.0	11.9	23.8
DIATOMA HIEMALE VAR. MESODON	.0	.0	11.9	.0	3.0	6.0
DIATOMA VULGARE	501.5	307.5	202.4	1607.5	654.8	647.1
EPITHEMIA SOREX	2700.6	2795.7	1190.7	707.3	1848.6	1058.0
FRAGILARIA VAUCHERIAE	154.3	28.0	35.7	64.3	70.6	58.0
GOMPHONEMA ANGUSTATUM	.0	.0	35.7	.0	8.9	17.9
GOMPHONEMA INTRICATUM VAR. PUMILA	.0	28.0	.0	.0	7.0	14.0
GOMPHONEMA OLIVACEUM	308.6	.0	.0	.0	77.2	154.3
HANNAEA ARCUS	.0	.0	.0	32.2	8.0	16.1
MELOSIRA VARIANS	38.6	.0	.0	128.6	41.8	60.7
NAVICULA CRYPTOCEPHALA	.0	167.7	11.9	.0	44.9	82.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	231.5	.0	.0	64.3	73.9	109.3
NAVICULA HEUFLERI	.0	28.0	71.4	.0	24.9	33.7
NAVICULA LANCEOLATA	38.6	139.8	.0	16.1	48.6	62.8
NAVICULA LUZONENSIS	.0	28.0	.0	.0	7.0	14.0
NAVICULA MINIMA	38.6	.0	.0	.0	9.6	19.3
NAVICULA NOTHA	.0	.0	.0	48.2	12.1	24.1
NAVICULA RADIOSA VAR. PARVA	.0	.0	.0	80.4	20.1	40.2
NAVICULA RHYNCHOCEPHALA	77.2	.0	.0	.0	19.3	38.6
NAVICULA SECRETA VAR. APICULATA	.0	.0	35.7	64.3	25.0	31.1
NAVICULA TRIPUNCTATA	77.2	.0	.0	.0	19.3	38.6
NAVICULA VIRIDULA	.0	922.6	119.1	48.2	272.5	436.2
NAVICULA VIRIDULA VAR. AVENACEA	501.5	.0	.0	.0	125.4	250.8
NITZSCHIA DENTICULA	.0	.0	.0	16.1	4.0	8.0
NITZSCHIA DISSIPATA	77.2	139.8	47.6	16.1	70.2	52.7
NITZSCHIA FRUSTULUM	231.5	111.8	107.2	80.4	132.7	67.3
NITZSCHIA HOLSATICA	.0	.0	47.6	.0	11.9	23.8
NITZSCHIA LINEARIS	38.6	.0	.0	.0	9.6	19.3
NITZSCHIA PALEA	.0	55.9	.0	.0	14.0	28.0
RHOICOSPHENIA CURVATA	578.7	391.4	357.2	273.3	400.1	129.0
RHOPALODIA MUSCULUS	.0	.0	.0	16.1	4.0	8.0
SURIRELLA OVALIS	.0	.0	.0	16.1	4.0	8.0
SURIRELLA OVATA	.0	.0	.0	16.1	4.0	8.0
SYNEDRA FASCICULATA	.0	.0	.0	32.2	8.0	16.1
SYNEDRA ULNA	115.7	195.7	47.6	48.2	101.8	70.3
SYNEDRA ULNA VAR. CONSTRICTA	38.6	.0	.0	.0	9.6	19.3
UNIDENTIFIED PENNATE DIATOMS	.0	391.4	.0	.0	97.8	195.7
DIVISION TOTAL	6667.3	6262.3	2714.9	3745.5	4897.5	1986.1

CHLOROPHYTA						
CLADOPHORA GLOMERATA	3858.0	1761.3	476.3	1205.6	1825.3	1453.7
DIVISION TOTAL	3858.0	1761.3	476.3	1205.6	1825.3	1453.7
CYANOPHYTA						
ANABAENA SP.	.0	.0	.0	16.1	4.0	8.0
PHORMIDIUM SP.	36.6	.0	.0	32.2	17.7	20.6
DIVISION TOTAL	36.6	.0	.0	48.2	21.7	25.4
RHODOPHYTA						
AUDOUINELLA VIOLACEA	771.8	.0	.0	.0	192.9	385.8
DIVISION TOTAL	771.8	.0	.0	.0	192.9	385.8
TOTAL DENSITY	11535.5	8023.6	3191.2	4999.4	1937.4	3856.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.463
VARIANCE = .0003
MAXIMUM INDEX = 3.892
EVENNESS = .633
NO OF SPECIES = 49

STATION NUMBER - 29
NUMBER OF REPLICATES - 4
DATE - 072280

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES MINUTISSIMA	221.0	1148.5	173.8	75.4	392.1	511.1
AMPHORA PERPUSILLA	80.4	213.7	69.4	.0	90.9	89.3
COCCONEIS PLACENTULA	40.2	80.1	34.7	50.8	51.5	20.2
CYCLOTELLA MENEGHINIANA	241.1	26.7	.0	.0	67.0	116.8
CYMBELLA MINUTA	20.1	.0	104.2	330.0	113.6	151.2
CYMBELLA MINUTA VAR. SILESIACA	.0	213.7	.0	304.8	129.6	154.1
CYMBELLA SINUATA	.0	26.7	.0	.0	6.7	13.4
DIATOMA VULGARE	241.2	106.8	208.3	482.3	264.7	158.6
EPITHEMIA SOREX	1065.0	133.5	3958.3	2690.5	1961.8	1699.4
FRAGILARIA VAUCHERIAE	.0	.0	34.7	.0	8.7	17.4
GOMPHONEMA INTRICATUM	.0	.0	34.7	.0	8.7	17.4
GOMPHONEMA OLIVACEUM	80.4	480.8	.0	.0	140.3	230.1
GOMPHONEMA PARVULUM	.0	160.3	69.4	.0	57.4	76.0
NAVICULA CRYPTOCEPHALA	.0	.0	104.2	.0	26.0	52.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	80.4	26.7	.0	.0	26.8	37.9
NAVICULA GRACILOIDES	20.1	.0	.0	.0	5.0	10.0
NAVICULA HEUFLERI	.0	.0	69.4	.0	17.4	34.7
NAVICULA LANCEOLATA	.0	.0	69.4	.0	17.4	34.7
NAVICULA LUZONENSIS	.0	26.7	34.7	.0	15.4	18.0
NAVICULA MINIMA	20.1	80.1	.0	.0	25.1	37.9
NAVICULA NOTHA	40.2	.0	.0	.0	10.0	20.1
NAVICULA RADIOSA VAR. PARVA	.0	.0	34.7	.0	8.7	17.4
NAVICULA RHYNCHOCEPHALA	40.2	.0	.0	.0	10.0	20.1
NAVICULA SECRETA VAR. APICULATA	20.1	53.4	.0	.0	18.4	25.2
NAVICULA TRIPUNCTATA	20.1	26.7	.0	25.4	18.0	12.4
NAVICULA VIRIDULA	100.5	.0	.0	.0	25.1	50.2
NAVICULA VIRIDULA VAR. AVENACEA	.0	293.8	69.4	152.3	128.9	128.3
NITZSCHIA DISSIPATA	80.4	373.9	104.2	.0	139.6	162.4
NITZSCHIA FRUSTULUM	40.2	1923.1	486.1	76.1	631.4	884.6
NITZSCHIA HUNGARICA	.0	.0	34.7	.0	8.7	17.4
NITZSCHIA LINEARIS	20.1	.0	.0	.0	5.0	10.0
PHOTOSPHENIA CURVATA	401.9	133.5	208.3	50.8	198.6	150.0
RHOPALODIA GIBBA	.0	.0	138.9	.0	34.7	69.4
SYNEDRA ACUS	.0	.0	.0	76.1	19.0	38.1
SYNEDRA ULNA	120.6	.0	.0	.0	30.1	60.3
SYNEDRA ULNA VAR. CONSTRICTA	.0	106.9	.0	.0	26.7	53.4
DIVISION TOTAL	3014.1	5635.7	6041.7	4264.1	4738.9	1378.8
CHLOROPHYTA						
CLADOPHORA GLOMERATA	2655.8	694.4	1250.0	.0	1650.0	893.8
STIGEOCLONIUM TENUE	.0	2667.4	.0	.0	716.9	1429.0
DIVISION TOTAL	2655.8	3362.4	1250.0	.0	1723.0	1491.5

CYANOPHYTA						
OSCILLATORIA SP.	.0	106.8	.0	.0	26.7	53.4
PHORMIDIUM SP.	100.5	.0	.0	253.8	88.6	119.9
DIVISION TOTAL	100.5	106.8	.0	253.8	115.3	104.5
RHODOPHYTA						
AUDOUINELLA VIOLACEA	321.9	.0	1145.8	1421.4	722.2	670.9
DIVISION TOTAL	321.9	.0	1145.8	1421.4	722.2	670.9
TOTAL DENSITY	5225.8	9294.9	8437.5	8939.3	7299.4	1850.5

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.576
VARIANCE = .0002
MAXIMUM INDEX = 3.714
EVENNESS = .694
NO OF SPECIES = 41

AUGUST

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPITITIONS - 4
DATE - 081880

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	514.4	456.8	761.1	1731.2	865.8	591.8
ACHNANTHES LANCEOLATA	15.4	26.6	37.7	16.5	24.1	10.4
ACHNATHES SP.	5.1	.0	.0	.0	1.3	2.6
COCCONEIS PLACENTULA	5.1	.0	.0	.0	1.3	2.6
CYCLOTELLA MENEGHINIANA	.0	4.4	.0	.0	1.1	2.2
CYMBELLA MINUTA	15.4	31.0	165.8	379.2	147.9	168.4
CYMBELLA MINUTA VAR. SILESIACA	20.6	4.4	.0	.0	6.3	9.8
DIATOMA VULGARE	.0	4.4	.0	.0	1.1	2.2
EPITHEMIA SOREX	.0	48.8	.0	.0	12.2	24.4
FRAGILARIA VAUCHERIAE	5.1	.0	15.1	65.9	21.5	30.3
GYROSIGMA SPENCERII	.0	.0	7.5	.0	1.9	3.8
HANTZSCHIA AMPHIOXYS	5.1	.0	.0	.0	1.3	2.6
NAVICULA AURICULATA	15.4	.0	15.1	.0	7.6	8.6
NAVICULA CRYPTOCEPHALA VAR. VENETA	5.1	.0	.0	.0	1.3	2.6
NAVICULA ELGINENSIS	5.1	.0	.0	.0	1.3	2.6
NAVICULA HALOPHILA	61.7	39.9	60.3	82.4	61.1	17.4
NAVICULA HEUFLERI	.0	4.4	.0	.0	1.1	2.2
NAVICULA PELLICULOSA	10.3	8.9	.0	.0	4.8	5.6
NAVICULA PYGMAEA	5.1	.0	.0	.0	1.3	2.6
NAVICULA SECRETA VAR. APICULATA	15.4	.0	7.5	16.5	9.9	7.7
NAVICULA VIRIDULA VAR. AVENACEA	.0	8.9	7.5	33.0	12.3	14.3
NITZSCHIA ACICULARIS	.0	.0	.0	16.5	4.1	8.2
NITZSCHIA DENTICULA	.0	.0	.0	16.5	4.1	8.2
NITZSCHIA EPITHEMOIDES	.0	.0	7.5	.0	1.9	3.8
NITZSCHIA FRUSTULUM	66.9	13.3	22.6	82.4	46.3	33.6
NITZSCHIA LINEARIS	10.3	.0	.0	.0	2.6	5.1
NITZSCHIA PALEA	.0	.0	.0	16.5	4.1	8.2
NITZSCHIA SP.	.0	.0	.0	49.5	12.4	24.7
SURIRELLA OVALIS	.0	4.4	.0	.0	1.1	2.2
SURIRELLA OVATA	5.1	.0	7.5	16.5	7.3	6.9
DIVISION TOTAL	787.0	656.3	1115.2	2522.6	1270.3	856.9
CHLOROPHYTA						
CLADOPHORA SP.	.0	44.3	82.9	379.2	126.6	171.6
MICROSPORA SP.	.0	.0	.0	164.9	41.2	82.4
SPIROGYRA SP.	.0	.0	.0	230.8	57.7	115.4
ZYGNEMA SP.	.0	.0	.0	65.9	16.5	33.0
DIVISION TOTAL	.0	44.3	82.9	840.9	242.0	400.7

TOTAL DENSITY	787.0	700.7	1198.1	3363.4	1512.3	1253.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.766
VARIANCE = .0017
MAXIMUM INDEX = 3.526
EVENNESS = .501
NO OF SPECIES = 24

STATION NUMBER - 14
NUMBER OF REPETITIONS - 4
DATE - 08180C

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	98.9	578.7	154.3	245.5	269.4	214.9
ACHNANTHES LANCEOLATA	.0	144.7	102.9	686.4	228.5	298.2
ACHNANTHES LANCEOLATA VAR. DUBIA	33.0	.0	.0	.0	8.2	16.5
ACHNANTHES MICROCEPHALA	33.0	192.9	.0	105.2	82.8	85.6
ACHNANTHES MINUTISSIMA	1714.7	5063.7	2572.0	3612.5	3240.7	1441.9
AMPHORA OVALIS	.0	96.5	.0	.0	24.1	48.2
COCCONEIS PEDICULUS	16.5	.0	.0	.0	4.1	8.2
COCCONEIS PLACENTULA	98.9	96.5	.0	175.4	92.7	71.8
CYCLOTELLA MENEGHINIANA	807.9	482.3	77.2	1613.4	745.2	651.4
CYMBELLA CISTULA	.0	.0	.0	35.1	8.8	17.5
CYMBELLA CYMBIFORMIS VAR. NONPUNCTAT	16.5	.0	51.4	.0	17.0	24.3
CYMBELLA MINUTA	16.5	48.2	77.2	35.1	44.2	25.5
CYMBELLA MINUTA VAR. SILESIACA	49.5	48.2	.0	.0	24.4	28.2
CYMBELLA SINUATA	16.5	.0	.0	.0	4.1	8.2
DENTICELA ELEGANS	16.5	.0	.0	.0	4.1	8.2
DIATOMA TENUE VAR. ELONGATUM	.0	.0	102.9	210.4	78.3	100.5
FRAGILARIA CAPUCINA	.0	.0	.0	491.0	122.8	245.5
FRAGILARIA CROTONENSIS	164.5	675.2	154.3	210.4	301.2	250.5
FRAGILARIA VAUCHERIAE	379.2	482.3	128.6	420.9	352.7	155.3
GOMPHONEMA ANGUSTATUM	.0	.0	.0	35.1	8.8	17.5
NAVICULA CRYPTOCEPHALA	.0	48.2	.0	70.1	29.6	35.3
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	96.5	.0	105.2	50.4	58.3
NAVICULA ELGINENSIS	.0	48.2	.0	.0	12.1	24.1
NAVICULA HEUFLERI	33.0	.0	.0	.0	8.2	16.5
NAVICULA MINIMA	.0	48.2	.0	.0	12.1	24.1
NAVICULA NOTHA	33.0	96.5	25.7	.0	38.8	41.0
NAVICULA PELLICULOSA	.0	.0	.0	35.1	8.8	17.5
NAVICULA SECRETA VAR. APICULATA	428.7	530.5	154.3	947.0	515.1	329.8
NAVICULA VIRIDULA VAR. AVERNACEA	16.5	.0	.0	.0	4.1	8.2
NITZSCHIA FRUSTULUM	181.4	337.8	154.3	350.7	256.0	102.5
NITZSCHIA LINEARIS	16.5	96.5	25.7	140.3	69.7	59.1
SURIRELLA OVATA	.0	.0	.0	35.1	8.8	17.5
SYNEDRA ACUS	33.0	.0	51.4	35.1	29.9	21.6
SYNEDRA FASCICULATA	.0	192.9	231.4	350.7	193.8	145.8
SYNEDRA NANESCHLA	.0	192.9	.0	70.1	65.8	91.0
THALASSIOSIRA FLUVIATILIS	148.4	289.4	102.9	526.1	266.7	191.3
DIVISION TOTAL	4352.6	9889.2	4166.7	10521.9	7231.8	3442.4

TOTAL DENSITY	4352.6	9886.2	4166.7	10521.9	7231.8	3442.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.221
VARIANCE = .0003
MAXIMUM INDEX = 3.584
EVENNESS = .620
NO OF SPECIES = 36

STATION NUMBER - 20
NUMBER OF REPETITIONS - 8
DATE - 081280

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	2805.8	4325.0	3395.1	3191.6	2204.6	3311.5	2472.2	2447.9	3019.2	696.2
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	.0	.0	18.4	.0	.0	.0	2.3	6.5
ACHNANTHES SP.	.0	.0	.0	17.5	.0	.0	.0	.0	2.2	6.2
AMPHORA COFFEIFORMIS	.0	.0	.0	.0	18.4	.0	.0	.0	2.3	6.5
AMPHORA PERPUSILLA	.0	.0	.0	17.5	.0	.0	.0	.0	2.2	6.2
CYCLOTELLA MENEGHINIANA	.0	.0	25.7	87.7	18.4	.0	152.8	34.7	39.9	54.1
CYMBELLA AFFINIS	.0	20.3	.0	.0	.0	.0	.0	.0	2.5	7.2
CYMBELLA MINUTA	.0	81.2	.0	.0	.0	.0	.0	.0	10.2	28.7
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	.0	36.7	.0	.0	.0	4.6	13.0
FRAGILARIA VAUCHERIAE	25.1	.0	.0	.0	.0	.0	.0	17.4	5.3	10.0
GOMPHONEMA ANGUSTATUM	.0	20.3	.0	35.1	.0	.0	.0	.0	6.9	13.4
GOMPHONEMA GRACILE	25.1	.0	25.7	17.5	18.4	.0	.0	34.7	15.2	13.6
GOMPHONEMA INTRICATUM	.0	.0	.0	.0	18.4	.0	.0	.0	2.3	6.5
GOMPHONEMA PARVULUM	.0	.0	.0	17.5	.0	.0	.0	.0	2.2	6.2
NAVICELLA CINCTA VAR. ROSTRATA	.0	.0	25.7	.0	.0	.0	.0	.0	3.2	9.1
NAVICELLA CRYPTOCEPHALA	.0	20.3	.0	.0	18.4	.0	.0	.0	4.8	9.0
NAVICELLA CRYPTOCEPHALA VAR. VENETA	.0	20.3	.0	.0	.0	.0	13.9	17.4	6.4	9.1
NAVICULA HALOPHILA	.0	.0	.0	17.5	55.1	.0	13.9	52.1	17.9	23.4
NAVICULA SALINARUM	.0	.0	.0	.0	.0	128.4	.0	.0	16.1	45.5
NITZSCHIA FRUSTULUM	.0	20.3	25.7	.0	55.1	.0	27.8	.0	16.1	20.0
NITZSCHIA LINEARIS	.0	.0	.0	35.1	.0	.0	13.9	.0	6.1	12.7
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	.0	.0	.0	.0	13.9	.0	1.7	4.9
NITZSCHIA SP.	.0	.0	.0	.0	.0	.0	13.9	.0	1.7	4.9
SURIRELLA OVALIS	.0	20.3	.0	.0	.0	.0	.0	17.4	4.7	6.8
SYNEDRA FASCICULATA	.0	.0	.0	.0	.0	.0	13.9	.0	1.7	4.9
SYNEDRA PULCHELLA	25.1	.0	.0	.0	.0	.0	.0	.0	3.1	8.9
SYNEDRA PULCHELLA VAR. LANCEOLATA	.0	101.5	.0	17.5	73.5	32.2	55.6	173.9	56.7	56.2
DIVISION TOTAL	2681.0	4629.8	3497.9	3454.7	2535.3	3472.2	2791.7	2795.1	3257.2	687.6

CHLOROPHYTA										
RHIZOCHAETA SP.	1979.1	852.8	205.8	52.6	790.0	.0	41.7	538.2	557.5	667.4
CLADOPHORA SP.	.0	812.2	.0	438.4	.0	96.5	569.4	312.5	278.6	307.5
DIVISION TOTAL	1979.1	1665.0	205.8	491.0	790.0	96.5	611.1	850.7	836.1	974.9
TOTAL DENSITY	4840.1	6294.7	3703.7	3945.7	3325.2	3568.7	3402.8	3649.8	4093.3	1010.6

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = .959
VARIANCE = .0005
MAXIMUM INDEX = 3.367
EVENNESS = .287
NO OF SPECIES = 29

STATION NUMBER - 21
NUMBER OF REPLICATES - 8
DATE - 081280

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	1116.1	2229.5	1374.4	770.8	1082.4	2361.1	1284.0	1961.8	1522.8	595.3
ACHNANTHES LANCEOLATA	.0	.0	12.1	13.9	.0	.0	.0	.0	3.2	6.0
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	18.3	24.1	.0	21.4	.0	.0	.0	8.0	11.1
AMPHORA OVALIS	.0	.0	12.1	.0	.0	.0	.0	.0	1.5	4.3
AMPHORA PERPUSILLA	41.3	.0	48.2	.0	.0	.0	12.5	.0	12.8	20.3
CYCLOTELLA MENEGHINIANA	82.0	91.4	.0	6.9	42.9	27.8	50.0	34.7	44.5	34.9
CYMBELLA AFFINIS	20.7	18.3	.0	.0	.0	.0	.0	.0	4.9	9.0
CYMBELLA CISTULA	.0	.0	.0	.0	.0	.0	12.5	.0	1.6	4.5
CYMBELLA MINUTA	.0	18.3	.0	.0	.0	13.9	25.7	.0	7.2	10.5
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	12.1	.0	.0	.0	.0	.0	1.5	4.3
EPITHEMIA SOREX	.0	.0	.0	.0	.0	.0	.0	17.4	2.2	6.1
FRAGILARIA CONSTRUENS	.0	.0	.0	.0	.0	.0	.0	17.4	2.2	6.1
GOMPHONEMA ANGUSTATUM	.0	18.3	.0	.0	.0	.0	12.5	.0	3.9	7.4
GOMPHONEMA GRACILE	.0	18.3	12.1	.0	.0	.0	.0	.0	3.8	7.2
GOMPHONEMA OLIVACEUM	.0	.0	.0	.0	.0	13.9	.0	.0	1.7	4.9
NAVICULA CINCTA VAR. ROSTRATA	20.7	.0	.0	.0	.0	.0	12.5	17.4	6.4	9.0
NAVICULA CRYPTOCEPHALA VAR. VENETA	41.3	36.5	12.1	20.8	10.7	.0	.0	17.4	17.4	15.3
NAVICULA HALOPHILA	.0	.0	.0	6.9	10.7	.0	64.3	.0	10.2	22.2
NAVICULA NOTHA	.0	.0	.0	.0	.0	.0	.0	17.4	2.2	6.1
NAVICULA SALINARUM	.0	.0	.0	.0	10.7	.0	.0	.0	1.3	3.8
NITZSCHIA APICULATA	.0	.0	12.1	.0	.0	.0	.0	.0	1.5	4.3
NITZSCHIA FRUSTULUM	.0	.0	.0	.0	.0	13.9	.0	17.4	3.9	7.3
NITZSCHIA SP.	20.7	.0	.0	.0	.0	.0	12.5	.0	4.2	8.0
PINNULARIA BREBISSONII	.0	.0	12.1	.0	.0	.0	.0	.0	1.5	4.3
RHOPALODIA MUSCULUS	.0	.0	.0	6.9	.0	.0	.0	.0	.9	2.5
SURIRELLA OVALIS	.0	.0	.0	6.9	.0	.0	.0	.0	.9	2.5
SURIRELLA OVATA	.0	.0	.0	6.9	.0	.0	12.5	.0	2.5	4.8
SYNEDRA PULCHELLA VAR. LANCEOLATA	41.3	274.1	84.4	.0	10.7	13.9	102.8	.0	75.8	100.7
DIVISION TOTAL	1364.1	2723.0	1615.5	860.3	1185.4	2444.4	1723.3	2101.7	1750.1	636.3

CHLOROPHYTA										
BULBOCHAETA SP.	2066.8	54.8	1073.0	736.1	707.3	319.4	835.9	347.2	767.6	618.3
CLADOPHORA SP.	124.0	785.8	180.8	.0	.0	138.9	.0	225.7	181.9	259.4
DIVISION TOTAL	2190.8	840.6	1253.9	736.1	707.3	458.3	835.9	572.9	949.5	553.6
CYANOPHYTA										
ANABAENA SP.	.0	.0	.0	6.9	.0	.0	.0	.0	.9	2.5
DIVISION TOTAL	.0	.0	.0	6.9	.0	.0	.0	.0	.9	2.5
TOTAL DENSITY	3554.9	3563.6	2869.4	1583.3	1896.9	2902.8	2559.2	2673.6	2700.5	702.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.275
VARIANCE = .0006
MAXIMUM INDEX = 3.434
EVENNESS = .371
NO OF SPECIES = 31

STATION NUMBER - 27
NUMBER OF REPITITIONS - 4
DATE - 081880

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES AFFINIS	.0	26.8	.0	.0	6.7	13.4
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	93.0	.0	23.3	46.5
ACHNANTHES MINUTISSIMA	248.0	.0	775.0	2483.6	876.7	1119.0
AMPHORA PERPUSILLA	.0	26.8	.0	.0	6.7	13.4
AMPHORA VENETA	.0	80.4	.0	.0	20.1	40.2
COCCONEIS PEDICULUS	41.3	.0	.0	.0	10.3	20.7
COCCONEIS PLACENTULA	20.7	26.8	186.0	120.6	88.5	79.5
CYCLOTELLA MENEGHINIANA	.0	.0	.0	48.2	12.1	24.1
CYMBELLA MINUTA	41.3	53.6	.0	.0	23.7	27.9
CYMBELLA MINUTA VAR. SILESIACA	62.0	.0	.0	1012.7	268.7	496.9
CYMBELLA SINUATA	20.7	.0	.0	.0	5.2	10.3
DIATOMA VULGARE	62.0	53.6	62.0	.0	44.4	29.9
EPITHEMIA SOREX	2108.1	2759.6	3162.2	168.8	2049.7	1327.0
GOMPHONEMA ACUMINATUM	.0	26.8	31.0	.0	14.4	16.8
GOMPHONEMA OLIVACEUM	82.7	375.1	31.0	.0	122.2	172.0
GOMPHONEMA PARVULUM	.0	.0	.0	265.2	66.3	132.6
GOMPHONEMA TRUNCATUM	20.7	.0	.0	.0	5.2	10.3
NAVICULA CRYPTOCEPHALA	20.7	.0	.0	24.1	11.2	13.0
NAVICULA CRYPTOCEPHALA VAR. VENETA	62.0	26.8	31.0	.0	29.9	25.4
NAVICULA HEUFLERI	41.3	.0	31.0	24.1	24.1	17.6
NAVICULA LANCEOLATA	41.3	.0	31.0	48.2	30.1	21.3
NAVICULA LUZONENSIS	62.0	.0	.0	.0	15.5	31.0
NAVICULA MINIMA	.0	.0	31.0	.0	7.8	15.5
NAVICULA NOTHA	20.7	160.8	31.0	48.2	65.2	64.7
NAVICULA PELLICULOSA	.0	26.8	.0	.0	6.7	13.4
NAVICULA RADIOSA VAR. PARVA	.0	.0	62.0	24.1	21.5	29.3
NAVICULA RHYNCHOCEPHALA	.0	26.8	.0	.0	6.7	13.4
NAVICULA SECRETA VAR. APICULATA	.0	26.8	.0	.0	6.7	13.4
NAVICULA TRIPUNCTATA	20.7	160.8	62.0	72.3	78.5	58.9
NAVICULA VIRIDULA	.0	428.7	.0	.0	107.2	214.3
NAVICULA VIRIDULA VAR. AVENACEA	537.4	.0	341.0	72.3	237.7	247.9
NITZSCHIA APICULATA	.0	.0	.0	96.5	24.1	48.2
NITZSCHIA DISSIPATA	.0	80.4	.0	289.4	92.4	136.6
NITZSCHIA FRUSTULUM	103.3	.0	.0	409.9	128.3	194.0
NITZSCHIA LATENS	.0	.0	.0	24.1	6.0	12.1
NITZSCHIA LINEARIS	.0	.0	.0	24.1	6.0	12.1
NITZSCHIA PALEA	20.7	26.8	.0	72.3	29.9	30.5
NITZSCHIA SP.	.0	.0	31.0	.0	7.8	15.5
PHOICOSPHENIA CURVATA	124.0	241.1	465.0	144.7	243.7	156.1
SURIRELLA OVATA	.0	.0	.0	48.2	12.1	24.1
SYNEDRA ULNA VAR. CONSTRICTA	.0	.0	31.0	.0	7.8	15.5
DIVISION TOTAL	3761.6	4635.0	5487.4	5521.8	4851.4	834.4

CHLOROPHYTA						
CLADOPHORA GLOMERATA	.0	1071.7	.0	.0	267.9	535.8
CLADOPHORA SP.	661.4	.0	1984.1	385.8	757.8	861.4
PALMELLA STAGE OF CHAETOPHORACEAE	227.3	.0	.0	.0	56.8	113.7
DIVISION TOTAL	888.7	1071.7	1984.1	385.8	1082.6	667.3
CYANOPHYTA						
OSCILLATORIA SP.	.0	26.8	.0	24.1	12.7	14.7
PHORMIDIUM SP.	103.3	562.6	.0	.0	166.5	288.5
CALOTHRIX SP.	1364.1	.0	310.0	.0	418.5	647.1
TOLYPOTHRIX SP.	268.7	.0	155.0	.0	105.9	130.8
DIVISION TOTAL	1736.1	589.4	465.0	24.1	703.7	729.8
RHODOPHYTA						
AUDOUINELLA VIOLACEA	599.4	.0	.0	.0	149.8	299.7
DIVISION TOTAL	599.4	.0	.0	.0	149.8	299.7
TOTAL DENSITY	4584.8	4296.1	7936.5	5931.7	6787.5	881.9

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.666
VARIANCE = .0003
MAXIMUM INDEX = 3.892
EVENNESS = .685
NO OF SPECIES = 40

STATION NUMBER - 29
NUMBER OF REPITITIONS - 4
DATE - 081880

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES MINUTISSIMA	300.8	7233.8	4718.7	3505.6	3939.6	2880.4
AMPHORA PERPUSILLA	33.4	217.0	89.0	100.2	109.9	77.2
CALONEIS VENTRICOSA	.0	.0	44.5	.0	11.1	22.3
COCCONEIS PEDICULUS	.0	.0	.0	100.2	25.0	50.1
COCCONEIS PLACENTULA	.0	.0	133.5	66.8	50.1	63.9
CYCLOTELLA MENEGHINIANA	.0	289.4	400.6	133.5	205.9	175.6
CYMBELLA MINUTA	.0	578.7	.0	.0	144.7	289.4
CYMBELLA MINUTA VAR. SILESIACA	166.9	723.4	756.8	701.1	587.1	281.0
DIATOMA VULGARE	33.4	.0	133.5	100.2	66.8	61.0
EPITHEMIA SOREX	1686.0	940.4	445.2	66.8	784.6	699.4
FRAGILARIA VAUCHERIAE	.0	.0	44.5	33.4	19.5	22.9
FRUSTULIA RHOMBOIDES	.0	.0	44.5	.0	11.1	22.3
GOMPHONEMA OLIVACEUM	.0	289.4	89.0	.0	94.6	136.5
GOMPHONEMA PARVULUM	33.4	.0	.0	100.2	33.4	47.2
GYROSIGMA SPENCERII	.0	.0	44.5	.0	11.1	22.3
NAVICULA CINCTA	.0	.0	.0	33.4	8.3	16.7
NAVICULA CRYPTOCEPHALA	16.7	.0	.0	33.4	12.5	16.0
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	.0	.0	66.8	16.7	33.4
NAVICULA LANCEOLATA	33.4	.0	.0	.0	8.3	16.7
NAVICULA NOTHA	.0	.0	.0	66.8	16.7	33.4
NAVICULA RHYNCHOCEPHALA	.0	.0	89.0	.0	22.3	44.5
NAVICULA SECRETA VAR. APICULATA	16.7	.0	.0	.0	4.2	8.3
NAVICULA TRIPUNCTATA	.0	217.0	267.1	.0	121.0	141.2
NAVICULA VIRIDULA	.0	.0	.0	200.3	50.1	100.2
NAVICULA VIRIDULA VAR. AVENACEA	83.5	144.7	489.7	.0	179.5	215.1
NAVICULA VIRIDULA VAR. LINEARIS	.0	72.3	.0	.0	18.1	36.2
NITZSCHIA APICULATA	.0	.0	.0	33.4	8.3	16.7
NITZSCHIA DISSIPATA	33.4	1157.4	534.2	100.2	456.3	517.5
NITZSCHIA FRUSTULUM	217.0	795.7	1157.4	1569.2	934.8	573.5
NITZSCHIA HOLSATICA	.0	.0	.0	66.8	16.7	33.4
NITZSCHIA HUNGARICA	.0	.0	267.1	.0	66.8	133.5
NITZSCHIA LINEARIS	33.4	.0	222.6	.0	64.0	106.9
NITZSCHIA PALEA	16.7	.0	89.0	.0	26.4	42.5
NITZSCHIA SP.	66.8	.0	.0	.0	16.7	33.4
PLEUROSIGMA DELICATISSIMA	16.7	.0	.0	.0	4.2	8.3
RHOICOSPHENIA CURVATA	33.4	217.0	400.6	2070.0	680.3	938.5
STEPHANODISCUS HANTZSCHII	.0	289.4	.0	.0	72.3	144.7
SURIRELLA OVALIS	.0	.0	.0	33.4	8.3	16.7
SURIRELLA OVATA	.0	72.3	89.0	66.8	57.0	39.2
SYNEDRA PULCHELLA VAR. LANCEOLATA	.0	.0	.0	133.5	33.4	66.8
SYNEDRA ULNA	16.7	.0	.0	100.2	29.2	47.9
DIVISION TOTAL	2637.9	13237.8	10550.2	9481.8	9026.9	4418.3

CHLOROPHYTA						
CLADOPHORA GLOMERATA	.0	.0	890.3	.0	222.6	445.2
CLADOPHORA SP.	333.9	.0	.0	667.7	250.4	319.7
DIVISION TOTAL	333.9	.0	890.3	667.7	473.0	384.5
CYANOPHYTA						
ANABAENA SP.	16.7	.0	.0	.0	4.2	8.3
OSCILLATORIA SP.	33.4	144.7	.0	.0	44.5	68.6
PHORMIDIUM SP.	.0	.0	.0	166.9	41.7	83.5
CALOTHRIX SP.	333.9	.0	.0	.0	83.5	166.9
TOLYPOTHRIX SP.	.0	361.7	.0	801.3	290.7	380.7
DIVISION TOTAL	383.9	506.4	.0	968.2	464.8	399.1
RHODOPHYTA						
AUDOUINELLA VIOLACEA	200.3	723.4	.0	.0	230.9	341.6
DIVISION TOTAL	200.3	723.4	.0	.0	230.9	341.6
TOTAL DENSITY	3756.0	14467.6	1144C.5	11117.8	10195.5	4950.4

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.511
VARIANCE = .0007
MAXIMUM INDEX = 3.892
EVENNESS = .645
NO OF SPECIES = 49

OCTOBER

PERIPHYTON DENSITY AND SPECIES DIVERSITY ESTIMATES

PID BLANCO OIL SHALE COMPANY
TRACT C-A

STATION NUMBER - 13
NUMBER OF REPETITIONS - 4
DATE - 101480

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA	5.0	6.0	.0	.0	2.7	3.2
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	3.0	.0	4.8	2.0	2.4
ACHNANTHES MINUTISSIMA	255.5	299.3	205.7	149.5	227.5	64.6
CYCLOTELLA MENEGHINIANA	7.4	.0	.0	9.6	4.3	5.0
CYMBELLA MINUTA	4.0	3.0	.0	.0	2.0	2.4
EPITHEMIA SOREX	.0	9.0	.0	.0	2.2	4.5
FRAGILARIA VAUCHERIAE	.0	.0	.0	9.6	2.4	4.8
NAVICULA CRYPTOCEPHALA VAR. VENETA	2.5	.0	.0	.0	.6	1.2
NAVICULA MEISTERI	5.0	22.9	.0	.0	7.2	11.4
NAVICULA SECRETA VAR. APICULATA	7.4	47.9	2.0	24.1	20.4	20.6
NAVICULA VIRIDULA VAR. AVENACEA	7.4	9.0	4.0	86.8	26.8	40.0
NITZSCHIA ACICULARIS	5.0	.0	.0	.0	1.2	2.5
NITZSCHIA DISSIPATA	.0	3.0	.0	.0	.7	1.5
NITZSCHIA FRUSTULUM	5.0	12.0	2.0	19.3	9.6	7.7
NITZSCHIA PALEA	.0	3.0	.0	.0	.7	1.5
RHOICOSPHENIA CURVATA	.0	.0	6.0	.0	1.5	3.0
SURIRELLA OVATA	.0	3.0	.0	.0	.7	1.5
UNIDENTIFIED PENNATE DIATOMS	.0	.0	4.0	.0	1.0	2.0
DIVISION TOTAL	305.1	422.1	223.8	303.8	313.7	81.4
CHLOROPHYTA						
ULOTHRIX	4.9	.0	.0	.0	2.5	5.0
DIVISION TOTAL	4.9	.0	.0	.0	2.5	5.0

RHODOPHYTA						
BATRACHOSPERMUM SP.	34.7	53.9	.0	482.3	142.7	227.5
DIVISION TOTAL	34.7	53.9	.0	482.3	142.7	227.5
TOTAL DENSITY	349.7	475.9	223.8	786.1	458.9	241.2

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.453
VARIANCE = .0036
MAXIMUM INDEX = 2.996
EVENNESS = .485
NO OF SPECIES = 20

STATION NUMBER - 14
NUMBER OF REPITITIONS - 4
DATE - 101480

TAXON	DENSITY (UNITS/PMZ) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA	463.0	309.3	453.8	.0	329.0	221.1
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	.0	154.3	38.6	77.2
ACHNANTHES MINUTISSIMA	2179.8	7326.4	3038.7	2121.9	2416.6	423.3
CYCLOTELLA MENEGHINIANA	.0	.0	59.2	.0	14.8	29.6
CYMBELLA CISTULA	.0	.0	.0	19.3	4.8	9.6
CYMBELLA MINUTA	.0	.0	.0	19.3	4.8	9.6
CYMBELLA MINUTA VAR. SILESIACA	.0	.0	.0	38.6	9.6	19.3
DENTICULA ELEGANS	.0	.0	19.7	.0	4.9	9.9
GOMPHONEMA ANGUSTATUM	.0	.0	59.2	.0	14.8	29.6
GOMPHONEMA PARVULUM	.0	.0	.0	38.6	9.6	19.3
NAVICULA ARVENSIS	.0	.0	.0	19.3	4.8	9.6
NAVICULA MEUELERI	96.5	.0	19.7	19.3	33.9	42.7
NAVICULA PELLICULOSA	38.6	.0	.0	.0	9.6	19.3
NAVICULA SECRETA VAR. APICULATA	578.7	52.1	19.7	270.1	230.1	257.6
NAVICULA VIRIDULA VAR. AVENACEA	19.3	.0	.0	.0	4.8	9.6
NITZSCHIA ACICULARIS	38.6	.0	.0	38.6	19.3	22.3
NITZSCHIA FRUSTULUM	424.4	52.1	177.6	57.9	178.0	174.2
NITZSCHIA PALEA	.0	.0	.0	19.3	4.8	9.6
PINNULARIA MAJOR	.0	17.4	.0	.0	4.3	8.7
SURIRELLA OVALIS	.0	.0	.0	19.3	4.8	9.6
SURIRELLA OVATA	19.3	.0	19.7	.0	9.8	11.3
SYNEDRA PULCHELLA	.0	.0	.0	57.9	14.5	28.9
UNIDENTIFIED PENNATE DIATOMS	38.6	.0	.0	.0	9.6	19.3
DIVISION TOTAL	3864.6	2847.2	3866.8	2893.5	3378.0	584.3
TOTAL DENSITY	3864.6	2847.2	3866.8	2893.5	3378.0	584.3

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.140
VARIANCE = .0006
MAXIMUM INDEX = 3.135
EVENNESS = .370
NO OF SPECIES = 23

STATION NUMBER = 20
NUMBER OF REPLICATES = 8
DATE = 101480

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	1961.2	2160.5	2370.5	2821.2	2430.6	4340.3	3428.5	3906.3	2927.4	869.5
ACHNANTHES LANCEOLATA	.0	.0	.0	.0	.0	28.9	.0	.0	3.6	10.2
ACHNANTHES LANCEOLATA VAR. DUPTA	86.4	.0	.0	.0	.0	.0	.0	.0	10.0	28.4
CYCLOTELLA MENEGHINIANA	140.8	57.9	.0	108.5	115.7	86.8	43.4	253.2	103.3	75.0
CYMBELLA PINUTA	.0	.0	50.1	43.4	28.9	173.6	21.7	.0	39.7	57.6
CYMBELLA PINUTA VAR. SILESIACA	14.1	57.9	100.2	.0	57.9	86.8	238.7	36.2	74.2	74.4
EPITHEMIA SOREX	.0	.0	.0	.0	.0	.0	.0	108.5	13.6	38.4
FRAGILARIA CROTONENSIS	.0	.0	50.1	.0	.0	.0	.0	.0	6.3	17.7
GOMPHONEMA FRACILE	.0	19.3	.0	.0	.0	28.9	.0	.0	6.0	11.5
NAVICULA HALOPHILA	.0	57.9	.0	.0	.0	.0	.0	36.2	11.8	22.5
NAVICULA MEUSLERI	.0	.0	.0	.0	.0	28.9	43.4	36.2	13.6	19.1
NAVICULA SECRETA VAR. APICULATA	.0	.0	.0	21.7	.0	.0	.0	.0	2.7	7.7
NITZSCHIA APICULATA	.0	19.3	.0	.0	.0	57.9	.0	.0	9.6	20.4
NITZSCHIA EPUSTULUM	144.7	.0	50.1	.0	28.9	86.8	108.5	.0	52.4	55.4
NITZSCHIA SP.	.0	.0	.0	.0	.0	28.9	.0	.0	3.6	10.2
RHOPALODIA GIBBA	.0	.0	.0	21.7	.0	.0	.0	.0	2.7	7.7
SURIRELLA OVATA	.0	.0	.0	.0	.0	.0	.0	72.3	9.0	25.4
SYNEDRA ACUS	.0	.0	16.7	.0	.0	28.9	21.7	36.2	12.9	14.9
SYNEDRA PINNUSCULA	14.1	.0	.0	.0	28.9	.0	.0	.0	5.4	11.0
SYNEDRA PULCHELLA VAR. LANCEOLATA	.0	.0	.0	.0	.0	.0	65.1	.0	8.1	23.0
UNIDENTIFIED PENNATE DIATOMS	32.2	.0	.0	.0	86.8	.0	.0	.0	14.9	31.2
DIVISION TOTAL	2411.3	2372.7	2637.4	3016.5	2777.8	4976.9	3571.4	4485.0	3331.1	1007.2
CHLOROPHYTA										
BULBOCHAETA SP.	868.1	455.9	83.5	716.1	3472.2	723.4	607.6	1627.6	1094.3	1050.3
DIVISION TOTAL	868.1	455.9	83.5	716.1	3472.2	723.4	607.6	1627.6	1094.3	1050.3

TOTAL DENSITY	3279.3	3026.5	2721.0	3732.6	4250.0	5700.2	4576.0	6112.6	4425.4	1438.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.056
VARIANCE = .0004
MAXIMUM INDEX = 3.091
EVENNESS = .342
NO OF SPECIES = 22

STATION NUMBER - 21
NUMBER OF REPETITIONS - 8
DATE - 101480

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	REP 5	REP 6	REP 7	REP 8	MEAN	S.D.
BACILLARIOPHYTA										
ACHNANTHES AFFINIS	2100.7	1944.4	1840.3	2463.0	1313.4	1781.4	1672.0	1652.4	1821.3	389.0
ACHNANTHES LANCEOLATA	.0	.0	.0	.0	.0	.0	.0	16.5	2.1	5.8
ACHNANTHES LANCEOLATA VAR. DUBIA	.0	.0	17.4	.0	.0	.0	.0	.0	2.2	6.1
AMPHORA COFFEIFORMIS	.0	.0	104.2	66.1	9.4	.0	54.7	99.2	46.7	46.8
CYCLOTELLA MENEGHINIANA	52.1	27.8	86.9	.0	9.4	.0	142.0	132.3	56.3	57.8
CYMBELLA MINUTA	173.6	.0	.0	49.6	.0	.0	15.8	16.5	31.9	59.7
CYMBELLA MINUTA VAR. SILESIACA	17.4	27.8	69.4	115.7	47.2	45.3	63.1	148.8	66.8	44.7
ENTOMONEIS PALUDOSA	.0	.0	.0	.0	.0	15.1	.0	.0	1.9	5.2
EPITHEMIA SOREX	34.7	.0	.0	.0	.0	.0	.0	.0	4.3	12.3
FRAGILARIA VAUCHERIAE	.0	27.8	34.7	.0	.0	.0	.0	.0	7.8	16.6
GOMPHONEMA GRACILE	17.4	13.9	34.7	.0	.0	.0	31.6	.0	12.2	14.7
NAVICULA CINCTA	.0	.0	34.7	.0	.0	.0	.0	.0	4.3	12.3
NAVICULA HALOPHILA	.0	.0	52.1	.0	18.9	15.1	.0	16.5	12.8	17.9
NAVICULA MEHELERI	17.4	.0	.0	.0	.0	.0	.0	.0	2.2	6.1
NAVICULA PYGMAEA	.0	.0	.0	.0	9.4	.0	.0	.0	1.2	3.3
NAVICULA SALINARUM	.0	.0	.0	16.5	.0	.0	.0	.0	2.1	5.8
NAVICULA SECRETA VAR. APICULATA	.0	13.9	.0	.0	.0	.0	.0	.0	1.7	4.9
NITZSCHIA FRUSTULUM	.0	.0	.0	16.5	.0	.0	78.9	.0	11.9	27.7
NITZSCHIA HOLSATICA	34.7	.0	.0	.0	.0	.0	.0	.0	4.3	12.3
NITZSCHIA LINEARIS	.0	.0	.0	16.5	.0	.0	.0	.0	2.1	5.8
NITZSCHIA MICROCEPHALA	.0	.0	.0	.0	9.4	.0	.0	.0	1.2	3.3
NITZSCHIA TRYBLIONELLA VAR. LEVIDENS	.0	.0	.0	.0	.0	.0	15.8	.0	2.0	5.6
SURIRELLA OVALIS	17.4	.0	17.4	16.5	.0	.0	.0	.0	6.4	8.8
SURIRELLA OVATA	.0	13.9	.0	.0	9.4	.0	.0	.0	2.9	5.5
SYNEDRA ACUS	52.1	.0	.0	.0	.0	.0	.0	.0	6.5	18.4
SYNEDRA FASCICULATA	.0	.0	.0	.0	.0	.0	15.8	.0	2.0	5.6
SYNEDRA MINUSCULA	.0	.0	17.4	.0	.0	.0	.0	.0	2.2	6.1
SYNEDRA PULCHELLA VAR. LANCEOLATA	.0	.0	17.4	.0	.0	90.6	110.9	181.9	50.0	65.4
SYNEDRA ULNA VAR. LANCEOLATA	.0	.0	.0	.0	37.7	.0	.0	.0	4.7	13.3
DIVISION TOTAL	2517.4	2065.4	2326.4	2781.2	1264.3	1947.5	2241.2	2285.2	2174.1	445.4

CHLOROPHYTA										
BULBOCHAETA SP.	434.0	111.1	347.2	496.0	349.1	377.4	410.4	1537.7	507.9	471.1
ENTEROMORPHA SP.	.0	.0	.0	.0	.0	452.9	.0	.0	56.6	160.1
SPIROGYRA SP.	.0	.0	.0	99.2	.0	.0	.0	.0	12.4	35.1
DIVISION TOTAL	434.0	111.1	347.2	595.2	349.1	830.3	410.4	1537.7	576.9	440.4
TOTAL DENSITY	2951.4	2180.6	2673.6	3356.5	1613.5	2777.8	2651.5	3802.5	2751.0	670.7

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 1.279
VARIANCE = .0008
MAXIMUM INDEX = 3.466
EVENNESS = .369
NO OF SPECIES = 32

STATION NUMBER - 27
NUMBER OF REPETITIONS - 3
DATE - 101480

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	MEAN	S.D.
BACILLARIOPHYTA					
ACHNANTHES MINUTISSIMA	69.4	.0	25.3	31.6	35.1
AMPHIPLEURA PELLUCIDA	.0	.0	3.6	1.2	2.1
AMPHORA PERPUSILLA	.0	.0	10.9	3.6	6.3
CALONEIS AMPHISBAENA	.0	.0	3.6	1.2	2.1
COCCONEIS PEDICULUS	34.7	192.9	117.1	113.2	79.1
COCCONEIS PLACENTULA	.0	.0	18.1	6.0	10.4
CYCLOTELLA MENEGHINIANA	.0	.0	3.6	1.2	2.1
CYMATOPLEURA SOLEA	.0	.0	3.6	1.2	2.1
CYMBELLA MINUTA	34.7	.0	3.6	12.8	19.1
CYMBELLA MINUTA VAR. SILESIACA	23.1	192.9	7.2	74.4	102.9
DIATOMA VULGARE	127.3	32.2	28.9	62.8	55.9
EPITHEMIA SOREX	1164.0	3215.0	387.0	1590.3	1460.3
FRAGILARIA LEPTOSTAURON	.0	32.2	.0	10.7	18.6
FRAGILARIA PINNATA	.0	32.2	3.6	11.9	17.6
FRAGILARIA VAUCHERIAE	.0	96.5	.0	32.2	55.7
GOMPHONEMA INTRICATUM VAR. PUMILA	.0	32.2	.0	10.7	18.6
GOMPHONEMA OLIVACEUM	.0	192.9	.0	64.3	111.4
GOMPHONEMA PARVULUM	11.6	.0	.0	3.9	6.7
GOMPHONEMA TRUNCATUM	.0	32.2	3.6	11.9	17.6
GYROSIGMA SPENCERII	.0	.0	10.9	3.6	6.3
NAVICULA CINCTA	11.6	.0	.0	3.9	6.7
NAVICULA CRYPTOCEPHALA VAR. VENETA	34.7	32.2	36.2	34.3	2.0
NAVICULA GRACILOIDES	.0	.0	3.6	1.2	2.1
NAVICULA KRUEGERI	11.6	.0	7.2	6.3	5.8
NAVICULA LANCEOLATA	.0	.0	7.2	2.4	4.2
NAVICULA LUZONENSIS	.0	32.2	.0	10.7	18.6
NAVICULA PINNA	.0	.0	10.9	3.6	6.3
NAVICULA PUPULA	11.6	.0	.0	3.9	6.7
NAVICULA PYGMAEA	.0	.0	3.6	1.2	2.1
NAVICULA RHYNCHOCEPHALA	.0	.0	21.7	7.2	12.5
NAVICULA SECRETA VAR. APICULATA	11.6	64.3	21.7	32.5	28.0
NAVICULA TRIPUNCTATA	57.9	128.6	3.6	63.4	62.7
NAVICULA VIRIDULA VAR. AVENACEA	23.1	192.9	54.3	90.1	90.4
NITZSCHIA ACICULARIS	.0	32.2	3.6	11.9	17.6
NITZSCHIA DISSIPATA	11.6	289.4	3.6	101.5	162.7
NITZSCHIA FRUSTULUM	81.0	.0	14.5	31.8	43.2
NITZSCHIA OBTUSATA	.0	96.5	.0	32.2	55.7
NITZSCHIA PANDURATA	11.6	.0	.0	3.9	6.7
NITZSCHIA TENUIRATA	.0	32.2	.0	10.7	18.6
NITZSCHIA TINEARIS	11.6	192.9	10.9	71.8	104.5
NITZSCHIA VALEA	11.6	192.9	.0	68.2	101.2
NITZSCHIA SP.	.0	96.5	.0	32.2	55.7
PINNULARIA SP.	.0	.0	3.6	1.2	2.1
PLEUROSIGMA DELICATULUM	.0	64.3	.0	21.4	37.1
RHOICOSPHENIA CURVATA	104.2	257.2	57.9	139.7	104.3
SYNEDRA PINNICULA	.0	.0	3.6	1.2	2.1
SYNEDRA ULNA	.0	32.2	.0	10.7	18.6
SYNEDRA ULNA VAR. CONSTRICTA	11.6	.0	10.9	7.5	6.5
UNIDENTIFIED PENNATE DIATOMS	11.6	.0	.0	3.9	6.7

CHLOROPHYTA					
CLADOPHORA GLOMERATA	34.7	321.5	408.7	255.0	195.7
DIVISION TOTAL	34.7	321.5	408.7	255.0	195.7
CYANOPHYTA					
ANABAENA SP.	.0	192.9	.0	64.3	111.4
PHORMIDIUM SP.	.0	128.6	39.8	56.1	65.8
DIVISION TOTAL	.0	321.5	39.8	120.4	175.3
TOTAL DENSITY	1921.3	6430.0	1352.7	3234.7	2781.8

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.321

VARIANCE = .0009
MAXIMUM INDEX = 3.951
EVENNESS = .587
NO OF SPECIES = 52

STATION NUMBER - 29
NUMBER OF REPITITIONS - 4
DATE - 101480

TAXON	DENSITY (UNITS/MM2) REP 1	REP 2	REP 3	REP 4	MEAN	S.D.
BACILLARIOPHYTA						
ACHNANTHES LANCEOLATA VAR. DUBIA	6.7	.0	.0	.0	1.7	3.3
ACHNANTHES MINUTISSIMA	734.5	4919.0	4967.2	4383.7	3751.1	2028.4
AMPHORA COFFEIFORMIS	.0	.0	96.5	.0	24.1	48.2
COCCONEIS PEDICULUS	13.4	.0	675.2	.0	172.1	335.4
COCCONEIS PLACENTULA	.0	.0	.0	43.4	10.9	21.7
CYCLOTELLA MENEGHINIANA	6.7	48.2	.0	86.8	35.4	40.4
CYMBELLA MEXICANA	.0	.0	48.2	.0	12.1	24.1
CYMBELLA MINUTA	.0	.0	.0	86.8	21.7	43.4
CYMBELLA MINUTA VAR. SILESIACA	574.3	2845.3	626.9	1692.7	1434.8	1072.3
DIATOMA VULGARE	33.4	144.7	144.7	43.4	91.5	61.5
EPITHEMIA SOREX	40.1	96.5	337.6	130.2	151.1	129.8
FRAGILARIA VAUCHERIAE	13.4	.0	.0	.0	3.3	6.7
GOMPHONEMA ACUMINATUM	.0	.0	144.7	.0	36.2	72.3
GOMPHONEMA ANGUSTATUM	.0	48.2	.0	.0	12.1	24.1
GOMPHONEMA INTRICATUM VAR. PUMILA	.0	.0	.0	43.4	10.9	21.7
GOMPHONEMA OLIVACEUM	13.4	.0	289.4	.0	75.7	142.6
GOMPHONEMA PARVULUM	6.7	144.7	144.7	43.4	84.9	70.7
NAVICULA CRYPTOCEPHALA	.0	48.2	.0	.0	12.1	24.1
NAVICULA CRYPTOCEPHALA VAR. VENETA	.0	96.5	.0	.0	24.1	48.2
NAVICULA GRACILOIDES	.0	.0	.0	43.4	10.9	21.7
NAVICULA MINUSCULA	.0	.0	48.2	.0	12.1	24.1
NAVICULA NOTHA	26.7	.0	.0	86.8	28.4	40.9
NAVICULA SALINARUM VAR. INTERMEDIA	20.0	.0	.0	.0	5.0	10.0
NAVICULA SECRETA VAR. APICULATA	6.7	.0	48.2	43.4	24.6	24.8
NAVICULA TRIPUNCTATA	.0	241.1	.0	.0	60.3	120.6
NAVICULA VIRIDULA VAR. AVENACEA	13.4	.0	626.9	130.2	192.6	295.4
NITZSCHIA DISSIPATA	.0	.0	48.2	.0	12.1	24.1
NITZSCHIA FONTICOLA	13.4	.0	.0	.0	3.3	6.7
NITZSCHIA FRUSTULUM	13.4	.0	1109.2	173.6	324.0	529.3
NITZSCHIA LINEARIS	.0	48.2	48.2	.0	24.1	27.6
NITZSCHIA MICROCEPHALA	6.7	.0	.0	.0	1.7	3.3
NITZSCHIA SP.	.0	48.2	.0	43.4	22.9	26.5
RHOICOSPHENIA CURVATA	73.5	.0	1157.4	130.2	340.3	547.4
SURIRELLA OVATA	.0	.0	48.2	.0	12.1	24.1
SYNEDRA ULNA	.0	.0	.0	43.4	10.9	21.7
SYNEDRA ULNA VAR. CONSTRICTA	6.7	.0	.0	.0	1.7	3.3
UNIDENTIFIED PENNATE DIATOMS	33.4	.0	.0	.0	8.3	16.7
DIVISION TOTAL	1656.0	6728.8	10609.6	7248.3	7060.6	3656.7

CHLOROPHYTA

CLADOPHORA GLOMERATA	.0	.0	2652.4	1085.1	934.4	1254.4
DIVISION TOTAL	.0	.0	2652.4	1085.1	934.4	1254.4

PHODOPHYTA

LEMANEA FLUVIATILIS	333.9	3665.1	.0	.0	999.7	1783.9
DIVISION TOTAL	333.9	3665.1	.0	.0	999.7	1783.9
TOTAL DENSITY	1989.9	12393.9	13262.0	8333.3	8994.8	5140.3

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX = 2.024
VARIANCE = .0002
MAXIMUM INDEX = 3.664
EVENNESS = .[illegible]55
NO OF SPECIES = 39

APPENDIX 4-2.5

Periphyton Biomass Estimates for all
Stations by Sampling Date for 1980

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 042180
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	51.6076	51.5439	1.274	
13B	52.3554	52.2851	1.406	1.340
14A	55.4332	55.0650	7.364	
14B	50.1032	49.4301	3.462	5.413
20A	46.9175	46.8600	1.150	
20B	47.9487	47.8954	1.066	1.108
21A	44.6366	44.5880	.972	
21B	46.8074	46.7038	2.072	1.522
27A	56.4000	55.9253	9.494	
27B	54.9231	54.2080	14.302	11.898
29A	48.4719	48.4058	1.322	
29B	47.6367	47.3870	4.994	3.158

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 051980
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	44.6567	44.6545	.222	
13B	44.7139	44.7012	.254	.238
14A	52.5539	52.4901	1.276	
14B	52.9972	52.9460	1.024	1.150
20A	44.7305	44.6706	1.198	
20B	46.2831	46.2437	.388	.793
21A	46.9463	46.9303	.320	
21B	47.7749	47.7647	.204	.262
27A	52.0649	52.0171	.958	
27B	50.3548	50.3111	.876	.917
29A	48.6022	48.5321	1.402	
29B	45.6283	45.5792	.982	1.192

PERIPHYTON BIOMASS ANALYSIS
PIC PLANCE OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 041680
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	.1515	.1245	.492	
13B	.1011	.0747	.528	.510
14A	.2547	.2245	.596	
14B	.3653	.3324	.658	.627
20A	.3162	.2219	1.886	
20B	.2905	.2235	1.332	1.609
21A	.4045	.2728	2.636	
21B	.3486	.2618	1.740	2.189

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 072180
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	.2639	.2419	.440	
13B	.2314	.2218	.192	.316
14A	.7755	.7537	.436	
14B	.8558	.8259	.598	.517
20A	.7175	.5600	3.150	
20B	.5022	.4195	1.654	2.402
21A	.4394	.4209	.370	
21B	.4543	.3992	1.102	.736
27A	1.7391	1.5388	4.006	
27B	1.6482	1.4686	3.592	3.799
29A	1.1243	1.0241	2.004	
29B	1.2634	1.1485	2.298	2.151

PERIPHYTON BIOMASS ANALYSIS
RIO BLANCO OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 081880
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	.0490	.0139	.710	
13B	.2258	.2043	.430	.570
14A	1.2377	1.1340	2.074	
14B	1.0150	.0779	2.742	2.408
20A	.5318	.4226	2.184	
20B	.0107	.7024	2.166	2.175
21A	1.1179	.0695	6.168	
21B	.9521	.6701	5.640	5.904
27A	4.0819	4.3713	10.212	
27B	3.7804	3.5050	5.508	7.860
29A	4.1323	3.6311	10.024	
29B	4.6674	4.0436	12.476	11.250

PERIPHYTON BIOMASS ANALYSIS
PICEANCE OIL SHALE COMPANY

SAMPLE COLLECTION DATE - 101480
ANALYST - RD
AREA SCRAPED - 50 CM2

STATION-REP	DRY WEIGHT (GM)	ASH WEIGHT (GM)	BIOMASS (MG/CM2)	STATION AVERAGE (MG/CM2)
13A	.7304	.7002	.604	
13B	.1281	.1145	.272	.438
14A	2.3944	2.2890	2.108	
14B	.3272	.2848	.848	1.478
20A	2.9330	2.1822	15.016	
20B	7.4367	6.5081	10.572	12.794
21A	.7876	.5990	3.772	
21B	.9352	.7288	4.128	3.950
27A	2.7224	2.5296	3.856	
27B	7.4367	6.5081	10.572	7.214
29A	7.0418	6.8286	8.264	
29B	24.4017	23.2837	22.360	15.312

APPENDIX 4-2.6

Species Composition of Macroinvertebrates at each Sampling Station over all Sampling Periods for 1980

BENTHOS SPECIES LIST

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
1986

TAXON	STATION NUMBER 13	14	20	21	27	29
PHYLUM NEMATODA		X				
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY HAPLOTAXIDAE						
HAPLOTAXIS	X					
FAMILY TUBIFICIDAE	X	X	X	X	X	X
TUBIFEX TUBIFEX	X	X			X	X
LIMNODRILUS HOFFMEISTERI	X	X	X	X	X	X
FAMILY NAIDIDAE		X				
NAIS SP.	X	X			X	
PHYLUM ARTHROPODA						
CLASS CRUSTACEA						
ORDER AMPHIPODA						
FAMILY TALITRIDAE						
HYALELLA AZTECA SAUSSURE		X		X		
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X	X		X	X	X
DACTYLOBAETIS				X	X	X
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY					X	X
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH					X	
RHITHROGENA EATON					X	X
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X				X	X
EPHEMERELLA WALSH					X	X
FAMILY LEPTOPHLEBIIDAE						
CHORCTERRES EATON					X	X
TRAVERELLA ALBERTANA BOULNEOUGH					X	X
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULNER			X	X	X	X
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
ORHIOGOMPHUS SELYS				X	X	X
SUBORDER ZYGOPTERA						
FAMILY COENAGRIONIDAE						
AMPHIAGRION SELYS				X		
ARGIA RAMBUR				X		
COENAGRION				X		
ORDER PLECOPTERA						
FAMILY CHLOROPERLIDAE	X					
FAMILY PERLODIDAE						
ISOPERLA BANKS					X	X
ISOGENOIDES ELONGATUS KLAPALEK						X
CLAASSENIA SABULOSA BANKS						X
ORDER COLEOPTERA			X			
FAMILY ELMIDAE						
OPTIOSERVUS	X					
FAMILY DYTISCIDAE						

AGABUS LEACH	X	X	X	X		
ACABINUS CROTCH	X	X	X	X		
DEROMECTES SHARP		X	X	X		
HYGROTUS			X			
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS					X	X
FAMILY HYDROPSYCHIDAE					X	
HYDROPSYCHE PICTET			X	X	X	X
FAMILY HYDROPTILIDAE						
AGRAYLEA CURTIS						X
HYDROPTILIDAE PUPA				X		
OCHROTRICHIA ROSS		X				
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAGYRACTIS LANGE					X	X
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GR. SPP. MEIGEN		X	X	X	X	X
FAMILY CHIRONOMIDAE	X					
SUBFAMILY TANYPODINAE						
TRIBE MACROPLEOPIINI						
PROCLADIUS SKUSE	X	X	X	X	X	X
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	X	X	X	X	X	X
PSEUDODIAMESA		X				X
SUBFAMILY ORTHOCLADIINAE				X		
ORTHOCLADIINAE A	X	X	X	X	X	X
ORTHOCLADIINAE B	X	X		X		
TRIBES ORTHOCLADIINI AND METRIOCNEMI						
CARDIOCLADIUS KIEFFER	X	X	X	X		
CRICOTOPUS VAN DER WULP	X	X	X	X		X
EUKIEFFERIELLA THIENEMANN	X			X	X	X
ORTHOCLADIUS VAN DER WULP	X	X	X	X	X	X
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CRYPTOCHIRONOMUS KIEFFER	X					
TRIBELOS		X			X	
TRIBE TANYTARSINI						
MICROSECTRA KIEFFER		X			X	X
CHIRONOMIDAE PUPAE	X	X	X	X		
FAMILY EPHYDRIDAE		X				
FAMILY EMPIDIDAE						
WIEDEMANNIA ZETTERSTEDT		X	X			
CHELIFERA MACQUART		X				
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	X	X	X	X		X
SIMULIUM LARVAE	X	X	X	X	X	X
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	X	X	X	X		
FAMILY TABANIDAE						
CHRYSOPS MEIGEN			X	X		
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	X				X	X
TIPULA LINNAEUS		X		X		
FAMILY STRATIOMYIDAE						
NEMOTELUS GEOFFROY		X				
EUPARYPHUS	X					

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

APPENDIX 4-2.7

Seasonal Changes in Macroinvertebrate Species Composition at each Sampling Station in 1980

BENTHOS SPECIES LIST

BIG BLANCO OIL SHALE COMPANY
TRACT C-A

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 13
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY HAPLOTAXIDAE						
HAPLOTAXIS						X
FAMILY TUBIFICIDAE	X	X				
TUBIFEX TUBIFEX			X			
LIMNODRILUS HOFFMEISTERI			X	X	X	X
FAMILY NAIDIDAE						
NAIS SP.						X
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH		X	X	X	X	X
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INFRMIS EATON		X				
ORDER PLECOPTERA						
FAMILY CHLOROPERLIDAE					X	X
ORDER COLEOPTERA						
FAMILY ELMIDAE						
OPTIOSERVUS						X
FAMILY DYTISCIDAE						
AGABUS LEACH			X			
AGABINUS CROTCH	X					
FAMILY CHIRONOMIDAE				X		
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	X			X	X	
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	X					
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A				X		
ORTHOCLADINAE P				X		
TRIBES ORTHOCLADIINI AND METRICNEMI						
CARDIOCLADIUS KIEFFER	X					
CRICOTOPUS VAN DER WULP	X				X	
EUKIEFFERIELLA THIENEMANN				X	X	X
ORTHOCLADIUS VAN DER WULP			X		X	
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CRYPTOCHIRONOMUS KIEFFER		X				
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	X				X	X
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE				X	X	
SIMULIUM LARVAE		X		X	X	X
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY				X	X	X
FAMILY TIPULIDAE						
HEXATOMA LATREILLE		X			X	
FAMILY STRATIOMYIDAE						
ELDARDYMUS					X	

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST

BIG BLANCO OIL SHALE COMPANY
TRACT C-A

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 16
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM NEMATODA		X	X		X	
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	X					
TUBIFEX TUBIFEX						X
LIMNODRILUS HOFFMEISTERI			X		X	X
FAMILY NAIDIDAE	X	X				
NAIS SP.				X		X
PHYLUM ARTHROPODA						
CLASS CRUSTACEA						
ORDER AMPHIPODA						
FAMILY TALITRIDAE						
HYALELLA AZTECA SAUSSURE	X					
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X		X		X	X
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH				X		
AGABINUS CRotch		X				
DERONECTES SHARP		X				
ORDER TRICHOPTERA						
FAMILY HYDROPTILIDAE						
OCHROTRICHIA ROSS	X					
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GR. SPP. MEIGEN		X		X		X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE				X		
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	X					
PSEUDODIAMESA	X		X			
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	X	X		X		
ORTHOCLADINAE B		X		X		
TRIBES ORTHOCLADIINI AND METRIOCNEMI						
CARDIOCLADIUS KIEFFER	X	X				
CRICOTOPUS VAN DER WULP	X		X			
ORTHOCLADIUS VAN DER WULP	X	X	X			X
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS					X	X
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER		X				X
CHIRONOMIDAE PUPAE	X	X	X	X	X	X
FAMILY EPHYDRIDAE			X			
FAMILY EMPIDIDAE						
WIEDEMANNIA ZETTERSTEDT	X					
CHELIFERA MACQUART					X	
FAMILY SIMULIIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	X	X	X		X	
SIMULIUM LARVAE	X	X	X	X	X	
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY			X	X	X	X
FAMILY TIPULIDAE						
TIPULA LINNAEUS					X	
FAMILY STRATIOMYIDAE						
NEMOTELUS GUERIN	X					

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST

BIG BLANCO OIL SHALE COMPANY
TRACT C-A

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 2C
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM ANNELIDA						
CLASS CLITELLATA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE		X				
LIMNODRILUS HOFFMEISTERI				X	X	
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER					X	
ORDER COLEOPTERA		X				
FAMILY DYTISCIDAE						
AGABUS LEACH			X	X		
AGAPINUS CROTCH		X				
DESMOPECTES SHARP			X			
HYGROTUS		X				
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET		X			X	X
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN					X	X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE						X
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	X	X	X			
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	X					
TRIBES ORTHOCLADIINI AND METRIOCNEMI						
CARDIOCLADIUS KIEFFER	X	X				
CRICOTOPUS VAN DER WULP		X				
ORTHOCLADIUS VAN DER WULP	X	X	X			X
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	X	X	X			
FAMILY EMPIDIDAE						
WIEDEMANNIA ZETTERSTEDT	X					
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE		X	X	X	X	X
SIMULIUM LARVAE	X	X	X	X	X	X
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY				X	X	
FAMILY TABANIDAE						
CHRYSOPS MEIGEN				X	X	

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST

RIO BLANCO OIL SHALE COMPANY
TRACT C-a

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 21
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE		x				
LIMNODRILUS HOFFMEISTERI			x		x	
PHYLUM ARTHROPODA						
CLASS CRUSTACEA						
ORDER AMPHIPODA						
FAMILY TALITRIDAE						
HYALELLA AZTECA SAUSSURE						x
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH						x
DACTYLOBAETIS					x	
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER					x	
ORDER CODNATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
CPHIGOMPHUS SELYS						x
SUBORDER ZYGOPTERA						
FAMILY COENAGRIONIDAE						
APPHIAGRION SELYS						x
ARGIA RAMBUR					x	x
COENAGRION						x
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH			x		x	x
AGABINUS CROTCH		x				
DERONECTES SHARP					x	
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET		x			x	x
FAMILY HYDROPTILIDAE						
HYDROPTILIDAE PUPA				x		
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN					x	x
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE				x	x	x
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	x	x	x			
SUBFAMILY ORTHOCLADIINAE				x		
ORTHOCLADINAE A				x	x	
ORTHOCLADINAE B				x	x	
TRIBES ORTHOCLADIINI AND METRIOCNEMI						
CARDIOCLADIUS KIEFFER	x	x				
CRICOTOPUS VAN DER WULP			x	x		
EUKIEFFERIELLA THIENEMANN					x	x
ORTHOCLADIUS VAN DER WULP	x	x	x			x
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	x	x	x	x	x	x
FAMILY SIMULIIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE			x	x	x	x
SIMULIUM LARVAE	x	x	x	x	x	
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY			x	x	x	
FAMILY TABANIDAE						
CHRYSOPS MEIGEN				x		
FAMILY TIPULIDAE						
TIPULA LINNAEUS						x

x = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST

BIG BLANCO OIL SHALE COMPANY
TRACT C-a

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 27
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM ANNELIDA						
CLASS CLITELLATA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	X					
TUBIFEX TUBIFEX					X	
LIMNODRILUS HOFFMEISTERI						X
FAMILY NAIDIDAE						
NAIS SP.				X		
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X			X	X	X
DACTYLOBAETIS				X	X	X
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY					X	
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH				X		X
RHITHROGENA EATON	X			X		
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	X			X		X
EPHEMERELLA WALSH				X		
FAMILY LEPTOPHLEBIIDAE						
CHEROTERPES EATON				X	X	
TRAVERELLA ALBERTANA MCDUNNOUGH					X	
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER				X	X	
ORDER CODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS					X	X
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	X					X
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS				X	X	X
FAMILY HYDROPSYCHIDAE					X	
HYDROPSYCHE PICTET	X			X		X
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAPYRACTIS LANGE					X	X
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN						X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE						X
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN						X
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A				X		
TRIBES ORTHOCLADIINI AND METRIOCNEMI						
ELKIEFFERIELLA THIENEMANN						X
ORTHOCLADIUS VAN DER WULP	X				X	X
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS					X	
TRIBE TANYTARSINI						
MICROSECTRA KIEFFER						X
FAMILY SIMULIIDAE						
SIMULIUM LARVAE				X		
FAMILY TIPULIDAE						
HEXATOMA LATREILLE				X	X	X

X = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

BENTHOS SPECIES LIST

RIO BLANCO OIL SHALE COMPANY
TRACT C-A

SPECIES OCCURRENCE BY SAMPLING DATE AT STATION 29
1980

TAXON	SAMPLING DATE APRIL	MAY	JUNE	JULY	AUGUST	OCTOBER
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	X					
TUBIFEX TUBIFEX				X		
LIMNODRILUS HOFFMEISTERI				X		X
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	X			X	X	X
DACTYLOBAETIS				X	X	
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY					X	
FAMILY HEPTAGENIIDAE						
HEPTAGENIA EATON				X	X	
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INFREMIS EATON	X				X	
EPHEMERELLA WALSH				X		
FAMILY LEPTOPHLEBIIDAE						
CHEROTERPES EATON				X	X	
TRAVERELLA ELPERSANA MCDUNNOUGH					X	
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER				X	X	X
ORDER CODNATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	X				X	
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	X			X	X	X
ISOGENOIDES ELONGATUS KNAPLEK	X					
CLASSENIA SABULOSA BANKS					X	X
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	X					
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	X			X	X	X
FAMILY HYDROPTILIDAE						
AGRAYLEA CURTIS					X	
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAPYRACTIS LANGE	X				X	X
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN						X
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE						X
SUBFAMILY DIAMESINAE						

TRIBE DIAMESINI				
DIAMESA BERCEN				x
PSEUDODIAMESA				x
SUBFAMILY ORTHOCLADIINAE				
ORTHOCLADINAE A	x	x		
TRIBES ORTHOCLADIINI AND METRIOCNEMI				
CRICOTOPUS VAN DER WULP			x	
EUKIEFFERIELLA THIENEMANN				x
ORTHOCLADIUS VAN DER WULP			x	x
SUBFAMILY CHIRONOMINAE				
TRIBE TANYTARSINI				
MICROPSECTRA KIEFFER				x
FAMILY SIMULIIDAE				
SIMULIUM ARCTICUM MALLOCH (PUPAE			x	
SIMULIUM LARVAE	x	x	x	
FAMILY TIPULIDAE				
HEXATOMA LATREILLE	x	x	x	x

x = ORGANISM IDENTIFIED TO THIS TAXONOMIC LEVEL OBSERVED AT SAMPLING STATION

APPENDIX 4-2.8

Macroinvertebrate Enumeration Data for
all Stations by Sampling Date for 1980

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOG NUMBER - (1-3)-129
SAMPLE DATE - 042180 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 052980 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
AGBS	AGABINUS CROTCH	0	1	0
TUBY	FAMILY TUBIFICIDAE	0	0	7
PROC	PROCLADIUS SKUSE	1	18	1
CARD	CARDIOCLADIUS KIEFFER	0	72	14
DIAM	DIAMESA MEIGEN	0	54	12
CRIC	CRICOTOPUS VAN DER WULP	0	17	0
PUPA	CHIRONOMIDAE PUPAE	0	18	5

PROJECT NO. - 129 STATION NO. - 14 LOG NUMBER - (4-6)-129
SAMPLE DATE - 042180 SAMPLES COLLECTED BY - RBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 052880 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	24	33	31
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	8	11	12
TUBY	FAMILY TUBIFICIDAE	5	23	6
NAID	FAMILY NAIDIDAE	8	14	6
BAET	BAETIS LEACH	2	10	2
HYAZ	HYALELLA AZTECA SAUSSURE	0	0	1
WIED	WIEDEMANNIA ZETTERSTEDT	1	3	1
NEMO	NEMOTELUS GEOFFROY	0	1	0
PUPA	CHIRONOMIDAE PUPAE	25	37	33
OCHR	OCHROTRICHIA ROSS	0	1	0
ORTA	ORTHOCLADINAE A	68	110	94
CARD	CARDIOCLADIUS KIEFFER	9	0	21
DIAM	DIAMESA MEIGEN	26	10	10
CRIC	CRICOTOPUS VAN DER WULP	8	0	40
PSEU	PSEUDODIAMESA	25	30	44
ORTH	ORTHOCLADIUS VAN DER WULP	35	50	10

PROJECT NO. - 129 STATION NO. - 20 LOG NUMBER - (7-9)-129
SAMPLE DATE - 0422P0 SAMPLES COLLECTED BY - R&OSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0528R0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
WIED	WIEDEMANNIA ZETTERSTEDT	1	0	0
SIMU	SIMULIUM LARVAE	0	0	1
DIAM	DIAMESA MEIGEN	15	0	40
CARD	CARDIOCLADIUS KIEFFER	23	34	38
ORTH	ORTHOCLADIUS VAN DER WULP	19	43	42
ORTA	ORTHOCLADINAE A	5	23	19
PUPA	CHIRONOMIDAE PUPAE	7	15	21

PROJECT NO. - 129 STATION NO. - 21 LOG NUMBER - (10-12)-129
SAMPLE DATE - 0422P0 SAMPLES COLLECTED BY - R&OSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0529R0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PUPA	CHIRONOMIDAE PUPAE	7	9	3
DIAM	DIAMESA MEIGEN	19	18	0
ORTH	ORTHOCLADIUS VAN DER WULP	27	65	24
CARD	CARDIOCLADIUS KIEFFER	19	14	12
SIMU	SIMULIUM LARVAE	1	3	0

PROJECT NO. - 129 STATION NO. - 27 LOG NUMBER - (13-15)-129
SAMPLE DATE - 042280 SAMPLES COLLECTED BY - PBDSC NO. OF REPLICATES - 3
ANALYSIS DATE - 060280 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TURIFICIDAE	29	4	0
ORTH	ORTHOCLADIUS VAN DER WULP	1	1	0
RHIT	RHITHROGENA EATON	6	5	0
EPIN	EPHEMERELLA INERMIS EATON	13	7	6
BAET	BAETIS LEACH	6	0	0
ISOP	ISOPERLA BANKS	0	1	3
HYSP	HYDROPSYCHE PICTET	3	0	7

PROJECT NO. - 129 STATION NO. - 29 LOG NUMBER - (16-18)-129
SAMPLE DATE - 042280 SAMPLES COLLECTED BY - PBDSC NO. OF REPLICATES - 3
ANALYSIS DATE - 060480 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
ISOG	ISOGENOIDES ELONGATUS KLAPALEK	4	0	0
EPIN	EPHEMERELLA INERMIS EATON	75	44	17
HYSP	HYDROPSYCHE PICTET	22	40	42
ISOP	ISOPERLA BANKS	12	3	0
BAET	BAETIS LEACH	9	0	5
TUBY	FAMILY TUBIFICIDAE	4	0	0
TIPS	HEXATOMA LATREILLE	0	6	1
OGMP	OPHIOGOMPHUS SELYS	0	2	0
BRAS	BRACHYCENTRUS CURTIS	0	1	6
ORTA	ORTHOCLADINAE A	0	1	4
SIMU	SIMULIUM LARVAE	0	0	1
PRAR	PARAGYRACTIS LANGE	0	5	0

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOC NUMBER - (19-21)-129
SAMPLE DATE - 051980 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 061980 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - COPRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	1	0	0
EPIN	EPHEMERELLA INERMIS EATON	1	0	0
TUBY	FAMILY TUBIFICIDAE	0	0	1
TIPS	PERATOMA LATREILLE	0	0	1
SIMU	SIMULIUM LARVAE	0	0	1
CRYP	CRYPTOCHIRONOMUS KIEFFER	3	0	0

PROJECT NO. - 129 STATION NO. - 14 LOC NUMBER - (22-24)-129
SAMPLE DATE - 051980 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 062080 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - COPRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
NAID	FAMILY NAIDIDAE	5	17	40
NEMA	PHYLUM NEMATODA	1	0	1
PUPA	CHIRONOMIDAE PUPAE	15	4	10
MICP	MICROPSECTRA KIEFFER	1	1	0
CARO	CARDIOCLADIUS KIEFFER	5	3	5
ORTH	ORTHOCLADIUS VAN DER WULP	10	8	4
ORTA	ORTHOCLADINAE A	1	10	6
ORTB	ORTHOCLADINAE B	1	0	0
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	1	0	0
SIMU	SIMULIUM LARVAE	1	1	0
PALP	PALPOMYIA GP. SPP. MEIGEN	0	1	0
AGRS	AGARINUS CRETCH	1	0	0
DERO	DERONECTES SHARP	1	0	0

PROJECT NO. - 129 STATION NO. - 20 LOC NUMBER - (25-27)-129
SAMPLE DATE - 051980 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 061980 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TUBY	FAMILY TUBIFICIDAE	2	1	1
SIMU	SIMULIUM LARVAE	1	1	7
PUPA	CHIRONOMIDAE PUPAE	1	3	3
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	1	1
CARD	CARDIOCLADIUS KIEFFER	2	3	2
CRIC	CRICOTOPUS VAN DER WULP	0	6	2
ORTH	ORTHOCLADIUS VAN DER WULP	0	0	4
DIAM	DIAMESA MEIGEN	0	0	2
COLE	ORDER COLEOPTERA	0	1	0
HYGR	HYDROTUS	0	1	0
AGBS	AGABINUS CRETCH	0	0	1
HYSP	HYDROPSYCHE PICTET	0	0	1

PROJECT NO. - 129 STATION NO. - 21 LOC NUMBER - (28-30)-129
SAMPLE DATE - 051980 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 061980 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	1	1	0
PUPA	CHIRONOMIDAE PUPAE	0	17	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	4	0
CARD	CARDIOCLADIUS KIEFFER	1	11	0
DIAM	DIAMESA MEIGEN	0	2	0
TUBY	FAMILY TUBIFICIDAE	0	2	5
AGBS	AGABINUS CRETCH	0	1	1
HYSP	HYDROPSYCHE PICTET	0	1	0

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOG NUMBER - (31-331-129
SAMPLE DATE - 061680 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 071180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - COPPAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	4	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	2	0	3
TUBI	TUBIFEX TUBIFEX	0	1	0
LIMH	LIMNODRILUS HOFFMEISTERI	0	0	1
AGAR	AGARUS LEACH	0	0	1

PROJECT NO. - 129 STATION NO. - 14 LOG NUMBER - (34-361-129
SAMPLE DATE - 061680 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 071180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - COPPAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
LIMH	LIMNODRILUS HOFFMEISTERI	26	19	4
CRTH	CRTHOCLADIUS VAN DER WULP	70	88	92
CRIC	CRICOTOPUS VAN DER WULP	38	20	12
PSEU	PSEUDOCHIRONOMUS	15	7	4
PUPA	CHIRONOMIDAE PUPAE	39	22	17
SIMU	SIMULIUM LARVAE	9	5	13
SIAR	SIPHLIUM ARCTICUM MALLOCH (PUPAE)	0	1	4
LMNU	LIMNOPHORA ROBINEAU-DESVOIDY	1	0	0
BAET	BAETIS LEACH	0	2	2
EPHY	FAMILY EPHYDRIDAE	0	1	0
NEMA	PHYLUM NEMATODA	0	0	1

PROJECT NO. - 129 STATION NO. - 20 LOG NUMBER - (37-39)-129
SAMPLE DATE - 061680 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 071280 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	142	43	23
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	18	8	3
PUPA	CHIRONOMIDAE PUPAE	0	11	6
ORTH	ORTHOCLADIUS VAN DER WULP	60	32	5
DIAM	DIAMESA MEIGEN	7	5	0
AGAB	AGABUS LEACH	1	2	0
DERO	DEROMECTES SHARP	2	0	0

PROJECT NO. - 129 STATION NO. - 21 LOG NUMBER - (40-42)-129
SAMPLE DATE - 061480 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 071280 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	56	83	87
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	8	20	17
PUPA	CHIRONOMIDAE PUPAE	17	0	0
LIMN	LIMNOPHILUS HOFFMEISTERI	2	0	0
ORTH	ORTHOCLADIUS VAN DER WULP	80	40	14
CRIC	CRICOTOPUS VAN DER WULP	23	6	0
DIAM	DIAMESA MEIGEN	11	1	0
LPNO	LIPNOPHORA ROBINEAU-DESVOIDY	0	1	0
AGAB	AGABUS LEACH	0	1	0

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOG NUMBER - (43-45)-129
SAMPLE DATE - 0721P0 SAMPLES COLLECTED BY - PBCSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0811P0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
LIMH	LIMNOPHILUS HOFFMEISTERI	5	10	2
BAET	BAETIS LEACH	38	24	21
ORTA	ORTHOCLADINAE A	15	0	17
SIMU	SIMULIUM LARVAE	118	122	476
ORTB	ORTHOCLADINAE B	13	0	14
EURI	EURIERIELLA THIENEMANN	0	3	0
LMNO	LIMNOPHORA ROBINEAU-DESVOIDY	8	7	10
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	3	0
PROC	PROCLADIUS SKUSE	0	0	1
CHIF	FAMILY CHIRONOMIDAE	0	0	1

PROJECT NO. - 129 STATION NO. - 14 LOG NUMBER - (46-48)-129
SAMPLE DATE - 0721P0 SAMPLES COLLECTED BY - PBCSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0811P0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PROC	PROCLADIUS SKUSE	3	1	4
ORTA	ORTHOCLADINAE A	120	147	78
ORTB	ORTHOCLADINAE B	111	123	93
PUPA	CHIRONOMIDAE PUPAE	1	8	5
BEAR	AGABUS LEACH	0	1	0
LMNO	LIMNEPHORA ROBINEAU-DESVOIDY	11	34	40
PALP	PALPOMYIA SP. SPP. MEIGEN	1	0	0
NAIS	NAIS SP.	0	7	14
SIMU	SIMULIUM LARVAE	0	2	8

PROJECT NO. - 129 STATION NO. - 20 LOG NUMBER - (49-51)-129
SAMPLE DATE - 0721P0 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0811P0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
CHOP	CHRYSOPS MEIGEN	1	0	0
SIMU	SIMULIUM LARVAE	78	109	64
LMNO	LIMNOPHORA ROBINEAU-DESVOIDY	0	6	1
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	45	44	67
AGAB	AGABUS LEACH	0	1	0
LIMH	LIMNODRILUS HOFFMEISTERI	0	19	2

PROJECT NO. - 129 STATION NO. - 21 LOG NUMBER - (52-54)-129
SAMPLE DATE - 0721P0 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 0811P0 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	12	13	2
SIMU	SIMULIUM LARVAE	54	15	11
HYPU	HYDROPTILIDAE PUPA	1	0	0
ORTA	ORTHOCLADINAE A	12	2	14
CHOP	CHRYSOPS MEIGEN	0	1	1
ORTB	ORTHOCLADINAE B	0	10	4
ORTF	SUBFAMILY ORTHOCLADIINAE	0	1	0
LMNO	LIMNOPHORA ROBINEAU-DESVOIDY	0	3	1
CRIC	CRICOTOPUS VAN DER WULP	0	0	10
PROC	PROCLADIUS SKUSE	0	0	1
PUPA	CHIRONOMIDAE PUPAE	0	0	2

PROJECT NO. - 129 STATION NO. - 27 LOG NUMBER - (55-57)-129
SAMPLE DATE - 072280 SAMPLES COLLECTED BY - PRCSC NO. OF REPLICATES - 3
ANALYSIS DATE - 081180 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
HYSP	HYDROPSYCHE PICTET	7	1	13
TIPS	HEXATOMA LATREILLE	1	0	0
BRAS	BRACHYCENTRUS CURTIS	1	0	1
HEPP	HEPTAGENIA WALSH	6	9	11
CHIP	CHIRONOMIDAE	1	2	1
EPSP	EPHEMERELLA WALSH	5	11	3
PHIT	PHITHROGENA EATON	5	0	1
DACT	DACTYLOBAETIS	10	0	15
BAET	BAETIS LEACH	15	6	8
SIMU	SIMULIUM LARVAE	3	0	0
ORTA	ORTHOCLADINAE A	14	4	4
NAIS	NAIS SP.	2	0	0
EPIN	EPHEMERELLA INERMIS EATON	0	3	3
TRIC	TRICORYTHODES ULMER	0	2	0

PROJECT NO. - 129 STATION NO. - 29 LOG NUMBER - (58-60)-129
SAMPLE DATE - 072280 SAMPLES COLLECTED BY - PRCSC NO. OF REPLICATES - 3
ANALYSIS DATE - 081180 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PHIT	PHITHROGENA EATON	44	24	31
HYSP	HYDROPSYCHE PICTET	10	3	6
LIPH	LIPACERINUS HOEFMEISTERI	4	18	0
BAET	BAETIS LEACH	18	20	26
DACT	DACTYLOBAETIS	1	0	0
CHIP	CHIRONOMIDAE EATON	0	3	0
TURT	TURBELLARIA TURBELLA	0	1	1
ISOP	ISOPERLA BANKS	0	3	3
ORTA	ORTHOCLADINAE A	0	4	2
SIMU	SIMULIUM LARVAE	0	8	0
TIPS	HEXATOMA LATREILLE	0	0	1
EPSP	EPHEMERELLA WALSH	0	0	4
TRIC	TRICORYTHODES ULMER	0	0	2

BENTHOS DATA SHEET
RIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOG NUMBER - (105-107)-129
SAMPLE DATE - 081880 SAMPLES COLLECTED BY - PBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 082380 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	30	32	48
CHLO	FAMILY CHLOROPERLIDAE	2	0	0
PUPA	CHIRONOMIDAE PUPAE	7	0	3
SIMU	SIMULIUM LARVAE	34	28	0
LIMH	LIMNOPHILUS HOFFMEISTERI	4	3	0
LMNO	LIMNOPHORA RORINEAU-DESVOIDY	5	3	3
ORTH	ORTHOCLADIUS VAN DER WULP	14	19	18
EUKI	EUKIEFFERIELLA THIENEMANN	8	11	33
CRIC	CRICOTOPUS VAN DER WULP	2	4	16
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	8	3	56
TIPS	HEXATOMA LATREILLE	1	0	0
EUPA	EUPARYPHUS	0	0	1
PROC	PROCLADIUS SKUSE	0	0	3

PROJECT NO. - 129 STATION NO. - 14 LOG NUMBER - (108-110)-129
SAMPLE DATE - 081880 SAMPLES COLLECTED BY - PBLSC NO. OF REPLICATES - 3
ANALYSIS DATE - 082480 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
LIMH	LIMNOPHILUS HOFFMEISTERI	58	0	0
LMNO	LIMNOPHORA RORINEAU-DESVOIDY	37	10	12
TRIB	TRIBELOS	58	47	22
PUPA	CHIRONOMIDAE PUPAE	4	8	2
TIPA	TIPULA LINNAEUS	1	0	0
NEMA	PHYLUM NEMATODA	1	0	0
BAET	BAETIS LEACH	0	2	4
SIMU	SIMULIUM LARVAE	0	4	5
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	1	0
CHEL	CHELIFERA MACQUART	0	0	1

PROJECT NO. - 129 STATION NO. - 20 LOG NUMBER - (111-113)-129
SAMPLE DATE - 081280 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 083080 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
HYSP	HYDROPSYCHE PICTET	5	0	17
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	9	26	15
SIMU	SIMULIUM LARVAE	2	15	0
LMNO	LIMNEPHORA RONINEAU-DESVOIDY	1	0	0
LIMH	LIMNOPHILUS HOFFMEISTERI	1	0	10
PALP	PALPOMYIA GP. SPP. MEIGEN	1	0	0
CHOP	CHRYSOPS MEIGEN	0	0	1
TRIC	TRICORYTHODES ULMER	0	6	0

PROJECT NO. - 129 STATION NO. - 21 LOG NUMBER - (114-116)-129
SAMPLE DATE - 081280 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 083080 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	10	43	19
PUPA	CHIRONOMIDAE PUPAE	3	0	1
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	7	8	7
TRIC	TRICORYTHODES ULMER	1	1	0
APGI	ARCIA RAMDLR	2	1	0
HYSP	HYDROPSYCHE PICTET	2	5	0
PALP	PALPOMYIA GP. SPP. MEIGEN	5	2	1
EUKI	EUKIEFFERIELLA THIENEMANN	2	0	0
PROC	PROCLADIUS SKUSE	1	5	0
ORTA	ORTHOCLADINAE A	6	7	0
ORTB	ORTHOCLADINAE B	0	6	0
LMNO	LIMNOPHORA RONINEAU-DESVOIDY	0	1	0
LIMH	LIMNOPHILUS HOFFMEISTERI	0	2	0
DERO	DEROMECTES SHARP	0	0	1
AGAR	AGARUS LEACH	0	0	1
DACT	DACTYLOBAETIS	0	0	3

PROJECT NO. - 129 STATION NO. - 27 LOG NUMBER - (117-119)-129
SAMPLE DATE - 081680 SAMPLES COLLECTED BY - PRESC NO. OF REPLICATES - 3
ANALYSIS DATE - 082380 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TRIC	TRICORYTHODES ULMER	41	63	37
DACT	DACTYLONAETIS	18	7	0
BAET	BAETIS LEACH	23	14	31
CHTP	CHEROTERPES EATON	6	4	11
BRAS	BRACHYCENTRUS CURTIS	1	23	7
HYCE	FAMILY HYDROPSYCHIDAE	18	48	27
TUBT	TUBIFEX TUBIFEX	0	2	0
TRIB	TRIBELOS	0	4	0
TRAA	TRAVERELLA ALBERTANA MCDUNNOUGH	0	8	12
TIPS	HEXATOMA LATREILLE	8	1	3
EALB	EPHEMON ALBUM SAY	0	0	2
PRAR	PARAGYPACTIS LANGE	0	0	3
OPHP	OPHIOGOMPHUS SELYS	0	0	1
ORTH	CRTHOCLADIUS VAN DER WULP	4	7	0

PROJECT NO. - 129 STATION NO. - 29 LOC NUMBER - (170-122)-129
SAMPLE DATE - 091880 SAMPLES COLLECTED BY - PBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 091280 SAMPLES ANALYZED BY - M.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
TPAA	TRAVERSELLA ALBERTANA MCDUNNOUGH	2	7	1
TRIC	TRICORYTHODES ULMER	27	11	38
BAET	BAETIS LEACH	76	43	65
RHIT	RHITHROGENA EATON	20	24	14
CHIP	CHIRONOMIDAE	16	11	18
CLAA	CLAASSENIA SABULOSA BANKS	3	0	2
ISOP	ISOPERLA BANKS	8	18	0
DACT	DACTYLOBAETIS	3	9	9
OGMP	OPHIOGOMPHUS SELYS	1	0	1
HYSP	HYDROPSYCHE PICTET	20	0	0
TIPS	HEXATOMA LATREILLE	4	0	0
PPAR	PARAGYRACTIS LANGE	1	1	0
CRTH	CRYPTOCLADIUS VAN DER WULP	8	12	22
CRIC	CRICOTOPUS VAN DER WULP	2	0	0
EALB	EPHORON ALBUM SAY	0	1	0
AGRY	AGRAYLEA CURTIS	0	1	0
EPIN	EPHEMERELLA INERMIS EATON	0	4	2
SIMU	SIMULIUM LARVAE	0	8	0
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	3	1

BENTHOS DATA SHEET
PIO BLANCO OIL SHALE COMPANY

PROJECT NO. - 129 STATION NO. - 13 LOG NUMBER - (123-1251-129
SAMPLE DATE - 101480 SAMPLES COLLECTED BY - PBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 102180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	4	8	8
OPTI	OPTIOSERVUS	1	0	0
HAPT	HAPLOTAXIS	4	3	8
LMNO	LIMNOPHORA ROBINEAU-DESVOIDY	2	11	11
NAIS	NAIS SP.	3	0	1
EUKI	EUKIEFFERIELLA THIENEMANN	1	3	3
CHLO	FAMILY CHLOROPERLIDAE	0	2	0
LIMH	LIMNOPHILUS HOFFMEISTERI	0	4	0
SIMU	SIMULIUM LARVAE	0	1	0
PUPA	CHIRONOMIDAE PUPAE	0	0	3

PROJECT NO. - 129 STATION NO. - 14 LOG NUMBER - (126-1281-129
SAMPLE DATE - 101480 SAMPLES COLLECTED BY - PBOSC NO. OF REPLICATES - 3
ANALYSIS DATE - 102180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - CORRAL GULCH

CODE	TAXON	REPLICATE DESIGNATION A	B	C
BAET	BAETIS LEACH	2	1	0
LMNO	LIMNOPHORA ROBINEAU-DESVOIDY	9	5	19
NAIS	NAIS SP.	4	1	0
LIMH	LIMNOPHILUS HOFFMEISTERI	20	0	0
PUPA	CHIRONOMIDAE PUPAE	7	0	0
PALP	PALPOMYIA GP. SPP. MEIGEN	1	0	0
TUBT	TUBIFEX TUBIFEX	12	4	0
TRIB	TRIBELOS	19	6	48
OPTH	ORTHOCLADIUS VAN DER WULP	4	0	11
MICP	MICROPSECTRA KIEFFER	0	0	1

PROJECT NO. - 129 STATION NO. - 20 LOG NUMBER - (129-131)-129
SAMPLE DATE - 101480 SAMPLES COLLECTED BY - RROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 103180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
SIMU	SIMULIUM LARVAE	5	59	48
ORTH	ORTHOCLADIUS VAN DER WULP	2	0	0
PROC	PROCLADIUS SKUSE	1	0	0
PALP	PALPOMYIA GP. SPP. MEIGEN	0	2	0
HYSP	HYDROPSYCHE PICTET	0	14	11
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	0	3	4

PROJECT NO. - 129 STATION NO. - 21 LOG NUMBER - (132-134)-129
SAMPLE DATE - 101480 SAMPLES COLLECTED BY - RROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 103180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - YELLOW CREEK

CODE	TAXON	REPLICATE DESIGNATION A	B	C
PROC	PROCLADIUS SKUSE	0	4	0
ORTH	ORTHOCLADIUS VAN DER WULP	0	18	0
EUKI	EUKIEFFERIELLA THIENEMANN	0	2	0
PALP	PALPOMYIA GP. SPP. MEIGEN	7	23	13
HYSP	HYDROPSYCHE PICTET	14	11	17
SIAR	SIMULIUM ARCTICUM MALLOCH (PUPAE)	19	0	0
ARGI	ARGIA RAMBUR	4	2	0
AMPG	AMPHIAGRION SELYS	5	1	2
COEN	COENAGRION	7	0	0
TIPA	TIPULA LINNAEUS	0	1	0
OGMP	OPHIOGOMPHUS SELYS	0	1	0
BAET	BAETIS LEACH	0	3	0
PUPA	CHIRONOMIDAE PUPAE	0	8	0
AGAB	AGABUS LEACH	0	11	0
HYAZ	HYALELLA AZTECA SAUSSURE	0	0	2

PROJECT NO. - 129 STATION NO. - 27 LOG NUMBER - (135-137)-129
SAMPLE DATE - 101580 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 103180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
OEMP	OPHIOGOMPHUS SELYS	2	0	0
HYSP	HYDROPSYCHE PICTET	27	0	13
ORTH	ORTHOCLADIUS VAN DER WULP	120	80	152
EUKI	EUKIEFFERIELLA THIENEMANN	20	9	30
PROC	PROCLADIUS SKUSE	32	18	43
HEPP	HEPTAGENIA WALSH	2	2	2
LIMH	LIMNOPHILUS HOFFMEISTERI	4	23	12
BRAS	BRACHYCENTRUS CURTIS	0	1	1
BAET	BAETIS LEACH	1	0	15
TIPS	HEXATOMA LATREILLE	0	0	2
PRAR	PARAGYRACTIS LANGE	0	0	1
DACT	DACTYLOBAETIS	0	0	1
EPIN	EPHEMERELLA INFERMIS EATON	0	0	2
ISOP	ISCOPELA RANKS	0	0	1
PALP	PALPOMYIA GP. SPP. MEIGEN	0	0	1
DIAM	DIAPESA MEIGEN	4	11	3
MICP	MICROPSECTRA KIEFFER	2	2	7

PROJECT NO. - 129 STATION NO. - 29 LOG NUMBER - (138-140)-129
SAMPLE DATE - 101580 SAMPLES COLLECTED BY - PROSC NO. OF REPLICATES - 3
ANALYSIS DATE - 103180 SAMPLES ANALYZED BY - H.ZIMMERMANN
SAMPLE STATION LOCATION - WHITE RIVER

CODE	TAXON	REPLICATE DESIGNATION A	B	C
HYSP	HYDROPSYCHE PICTET	432	37	92
ORTH	ORTHOCLADIUS VAN DER WULP	40	28	72
EUKI	EUKIEFFERIELLA THIENEMANN	3	0	4
DIAM	DIAPESA MEIGEN	0	1	0
MICP	MICROPSECTRA KIEFFER	0	2	1
PROC	PROCLADIUS SKUSE	11	22	14
PSEU	PSEUDODIAMESA	1	0	0
LIMH	LIMNOPHILUS HOFFMEISTERI	8	23	0
BAET	BAETIS LEACH	0	27	14
TIPS	HEXATOMA LATREILLE	8	11	3
PRAR	PARAGYRACTIS LANGE	5	4	5
ISOP	ISCOPELA RANKS	18	27	11
PALP	PALPOMYIA GP. SPP. MEIGEN	0	2	0
CLAA	CLAASSENIA SABULOSA RANKS	0	1	0
TRIC	TRICORYTHODES ELMER	0	0	1

APPENDIX 4-2.9

Macroinvertebrate Density and Species Diversity Calculations
for all Stations by Sampling Date for 1980

APRIL

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042180

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	.0	.0	135.9	45.3	78.5	3.2
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABINUS CROTCH	.0	19.4	.0	6.5	11.2	.5
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPTINI						
PROCLADIUS SKUSE	19.4	349.5	19.4	129.4	190.6	9.1
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	.0	1048.5	233.0	427.2	550.6	30.0
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CARDIOCLADIUS KIEFFER	.0	1398.1	271.8	556.6	741.3	39.1
CRICOTOPUS VAN DER WULP	.0	330.1	.0	110.0	190.6	7.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	349.5	97.1	148.9	180.4	10.5
TOTAL	19.4	3495.1	757.3	1423.9	1431.3	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	135.9	45.3	78.5	3.2
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	19.4	.0	6.5	11.2	.5
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	19.4	3475.7	621.4	1372.2	1846.4	96.4
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

- -

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.514
VARIANCE - .0004

MAXIMUM INDEX - 1.946
EVENNESS - .778
NO OF SPECIES - 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042180

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	97.1	446.6	116.5	220.1	196.4	3.8
FAMILY NAIDIDAE	155.3	271.8	116.5	181.2	80.8	3.2
PHYLUM ARTHROPODA						
CLASS CRUSTACEA						
ORDER AMPHIPODA						
FAMILY TALITRIDAE						
HYALELLA AZTECA SAUSSURE	.0	.0	19.4	6.5	11.2	.1
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	38.8	194.2	38.8	90.6	89.7	1.6
ORDER TRICHOPTERA						
FAMILY HYDROPTILIDAE						
OCHROTRICHIA ROSS	.0	19.4	.0	6.5	11.2	.1
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	504.9	194.2	194.2	297.7	179.4	5.2
PSEUDODIAMESA	485.4	582.5	854.4	640.8	191.2	11.1
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	1320.4	2135.9	1825.2	1760.5	411.6	30.6
TRIBES ORTHOCLADIINI AND METRIOCNE						
CARDIOCLADIUS KIEFFER	174.8	.0	407.8	194.2	204.6	3.4
CRICOTOPUS VAN DER WULP	155.3	.0	776.7	310.7	411.0	5.4
ORTHOCLADIUS VAN DER WULP	679.6	970.9	194.2	614.9	392.4	10.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	485.4	718.4	640.8	614.9	118.6	10.7
FAMILY EMPIDIDAE						
WIEDEMANNIA ZETTERSTEDT	19.4	58.3	19.4	32.4	22.4	.6
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	155.3	213.6	233.0	200.6	40.4	3.5
SIMULIUM LARVAE	466.3	640.8	601.9	569.6	91.6	9.9
FAMILY STRATIOMYIDAE						
NEMOTELUS GEORGDY	.0	19.4	.0	6.5	11.2	.1
TOTAL	4737.9	6466.0	6038.8	5747.6	900.1	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	252.4	718.4	233.0	401.3	274.8	7.0
ORDER EPHEMEROPTERA	38.8	194.2	38.8	90.6	89.7	1.6
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	19.4	0	6.5	11.2	.1
FAMILY CHIRONOMIDAE	3805.8	4661.9	4893.2	4433.7	562.9	77.1
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.208
VARIANCE - .0001
MAXIMUM INDEX - 2.773
EVENNESS - .797
NO OF SPECIES - 16

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042280

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	291.3	.0	776.7	356.0	392.4	15.9
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	97.1	446.6	368.9	304.2	183.5	13.6
TRIBES ORTHOCLADIINI AND METRIOCNE						
CARDIOCLADIUS KIEFFER	446.6	660.2	737.9	614.9	150.8	27.5
ORTHOCLADIUS VAN DER WULP	368.9	835.0	815.5	673.1	264.6	30.1
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	135.9	291.3	407.8	278.3	136.4	12.4
FAMILY EMPIDIDAE						
WIEDEMANNIA ZETTERSTEDT	19.4	.0	.0	6.5	11.2	.3
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	.0	19.4	6.5	11.2	.3
TOTAL	1359.2	2233.0	3126.2	2239.5	883.5	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	1339.8	2233.0	3106.8	2226.5	883.5	99.4
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.573
VARIANCE - .0001
MAXIMUM INDEX - 1.946
EVENNESS - .808
NO OF SPECIES - 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042280

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	468.9	349.5	.0	239.5	207.6	16.7
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CARDIOCLADIUS KIEFFER	368.9	271.8	233.0	291.3	70.0	20.4
ORTHOCLADIUS VAN DER WULP	524.3	1262.1	466.0	750.8	443.8	52.5
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	135.9	174.8	58.3	123.0	59.3	8.6
FAMILY SIMULIDAE						
SIMULIUM LARVAE	19.4	58.3	.0	25.9	29.7	1.8
TOTAL	1417.5	2116.5	757.3	1430.4	679.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	1398.1	2058.3	757.3	1404.5	650.5	98.2
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.245
VARIANCE - .0004
MAXIMUM INDEX - 1.609
EVENNESS - .774
NO OF SPECIES - 5

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042280

STATION NUMBER - 27
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	563.1	77.7	.0	213.6	305.2	35.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	116.5	.0	.0	38.8	67.3	6.5
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	116.5	97.1	.0	71.2	62.4	12.0
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INFERMIS EATON	252.4	135.9	116.5	168.3	73.5	28.3
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	.0	19.4	58.3	25.9	29.7	4.3
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	58.3	.0	135.9	64.7	68.2	10.9
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	19.4	19.4	.0	12.9	11.2	2.2
TOTAL	1126.2	349.5	310.7	595.5	460.0	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	563.1	77.7	.0	213.6	305.2	35.9
ORDER EPHEMEROPTERA	485.4	233.0	116.5	278.3	188.6	46.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	19.4	58.3	25.9	29.7	4.3
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	58.3	.0	135.9	64.7	68.2	10.9
FAMILY CHIRONOMIDAE	19.4	19.4	.0	12.9	11.2	2.2
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.619
VARIANCE - .0009
MAXIMUM INDEX - 1.946
EVENNESS - .831
NO OF SPECIES - 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
042280

STATION NUMBER - 29
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	77.7	.0	.0	25.9	44.8	1.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	174.8	.0	97.1	90.6	87.4	4.7
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	1456.3	854.4	330.1	880.3	563.6	45.6
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	.0	38.8	.0	12.9	22.4	.7
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	233.0	58.3	.0	97.1	121.3	5.0
ISOGENOIDES ELONGATUS KLAPALEK	77.7	.0	.0	25.9	44.8	1.3
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	.0	19.4	.0	6.5	11.2	.3
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	427.2	776.7	815.5	673.1	213.9	34.9
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAGYRACTIS LANGE	.0	97.1	.0	32.4	56.1	1.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	.0	19.4	77.7	32.4	40.4	1.7
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	.0	19.4	6.5	11.2	.3
FAMILY TIPULIDAE						
HEXATOMA LAIPETTILE	.0	116.5	19.4	45.3	62.4	2.3
TOTAL	2446.6	1980.6	1359.2	1928.8	545.5	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	77.7	.0	.0	25.9	44.8	1.3
ORDER EPHEMEROPTERA	1631.1	854.4	427.2	970.9	610.3	50.3
ORDER ODONATA	.0	38.8	.0	12.9	22.4	.7
ORDER PLECOPTERA	310.7	58.3	.0	123.0	165.1	6.4
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	427.2	796.1	815.5	679.6	718.8	35.2
FAMILY CHIRONOMIDAE	.0	19.4	77.7	32.4	40.4	1.7
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.432
VARIANCE - .0007
MAXIMUM INDEX - 2.485
EVENNESS - .576
NO OF SPECIES - 12

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BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
051980

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	.0	.0	19.4	6.5	11.2	12.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	19.4	.0	.0	6.5	11.2	12.5
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	19.4	.0	.0	6.5	11.2	12.5
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
CRYPTOCHIRONEMUS KIEFFER	58.3	.0	.0	19.4	33.6	37.5
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	.0	19.4	6.5	11.2	12.5
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	.0	.0	19.4	6.5	11.2	12.5
TOTAL	97.1	.0	58.3	51.8	48.5	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	19.4	6.5	11.2	12.5
ORDER EPHEMEROPTERA	38.8	.0	.0	12.9	22.4	25.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	58.3	.0	.0	19.4	33.6	37.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.667
VARIANCE - .0055
MAXIMUM INDEX - 1.792
EVENNESS - .931
NO OF SPECIES - 6

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
051980

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	19.4	.0	19.4	12.9	11.2	1.3
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY NAIDIDAE	97.1	330.1	776.7	401.3	345.4	40.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABINUS CROTCH	19.4	.0	.0	6.5	11.2	.6
DERONECTES SHARP	19.4	.0	.0	6.5	11.2	.6
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	19.4	.0	6.5	11.2	.6
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	19.4	194.2	116.5	110.0	87.6	11.0
ORTHOCLADINAE B	19.4	.0	.0	6.5	11.2	.6
TRIBES ORTHOCLADIINI AND METRIOCNE						
CARDIOCLADIUS KIEFFER	97.1	58.3	97.1	84.1	22.4	8.4
ORTHOCLADIUS VAN DER WULP	194.2	155.3	77.7	142.4	59.3	14.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	19.4	19.4	.0	12.9	11.2	1.3
CHIRONOMIDAE PUPAE	291.3	77.7	194.2	187.7	106.9	18.8
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	19.4	.0	.0	6.5	11.2	.6
SIMULIUM LARVAE	19.4	19.4	.0	12.9	11.2	1.3
TOTAL	835.0	873.8	1281.6	996.8	247.4	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	19.4	.0	19.4	17.9	11.2	1.3
CLASS OLIGOCHAETA	97.1	330.1	776.7	401.3	345.4	40.3
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	38.8	.0	.0	17.9	22.4	1.3
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	640.8	504.9	485.4	543.7	84.6	54.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

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DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.743
VARIANCE - .0010
MAXIMUM INDEX - 2.565
EVENNESS - .680
NO OF SPECIES - 13

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
051980

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	38.8	19.4	19.4	25.9	11.2	8.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA	.0	19.4	.0	6.5	11.2	2.1
FAMILY DYTISCIDAE						
AGABINUS CROTCH	.0	.0	19.4	6.5	11.2	2.1
HYGROTUS	.0	19.4	.0	6.5	11.2	2.1
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	.0	.0	19.4	6.5	11.2	2.1
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	.0	.0	38.8	12.9	22.4	4.3
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CAPOCLADIUS KIEFFER	38.8	58.3	38.8	45.3	11.2	14.9
CRICOTOPUS VAN DER WULP	.0	116.5	38.8	51.8	59.3	17.0
ORTHOCLADIUS VAN DER WULP	.0	.0	77.7	25.9	44.8	8.5
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	19.4	58.3	58.3	45.3	22.4	14.9
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	.0	19.4	19.4	12.9	11.2	4.3
SIMULIUM LARVAE	19.4	19.4	135.9	58.3	67.3	19.1
TOTAL	116.5	330.1	466.0	304.2	176.2	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	38.8	19.4	19.4	25.9	11.7	8.5
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	38.8	19.4	19.4	19.4	6.4
ORDER TRICHOPTERA	.0	.0	19.4	6.5	11.2	2.1
FAMILY CHIRONOMIDAE	58.3	233.0	252.4	181.2	106.9	59.6
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.201
VARIANCE - .0014
MAXIMUM INDEX - 2.485
EVENNESS - .886
NO OF SPECIES - 12

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
051980

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE	.0	38.8	97.1	45.3	48.9	14.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABINUS CROTCH	.0	19.4	19.4	12.9	11.2	4.3
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	.0	19.4	.0	6.5	11.2	2.1
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	.0	38.8	.0	12.9	22.4	4.3
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CAPNOCLADIUS KIEFFER	19.4	213.6	.0	77.7	118.1	25.5
ORTHOCLADIUS VAN DER WULP	.0	77.7	.0	25.9	44.8	8.5
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	330.1	.0	110.0	190.6	36.2
FAMILY SIMULIDAE						
SIMULIUM LARVAE	19.4	19.4	.0	12.9	11.2	4.3
TOTAL	38.8	757.3	116.5	304.2	394.3	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	38.8	97.1	45.3	48.9	14.9
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	19.4	19.4	12.9	11.2	4.3
ORDER TRICHOPTERA	.0	19.4	.0	6.5	11.2	2.1
FAMILY CHIRONOMIDAE	19.4	660.2	.0	226.5	375.7	74.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.695
VARIANCE - .0020
MAXIMUM INDEX - 2.079
EVENNESS - .815
NO OF SPECIES - 8

JUNE

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
061680

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
TUBIFEX TUBIFEX	.0	19.4	.0	6.5	11.2	8.3
LIMNODRILUS HOFFMEISTERI	.0	.0	19.4	6.5	11.2	8.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	77.7	.0	.0	25.9	44.8	33.3
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	.0	19.4	6.5	11.2	8.3
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	38.8	.0	58.3	32.4	29.7	41.7
TOTAL	116.5	19.4	97.1	77.7	51.4	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	19.4	19.4	12.9	11.2	16.7
ORDER EPHEMEROPTERA	77.7	.0	.0	25.9	44.8	33.3
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	19.4	6.5	11.2	8.3
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	38.8	.0	58.3	32.4	29.7	41.7
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.352
VARIANCE - .0056
MAXIMUM INDEX - 1.609
EVENNESS - .840
NO OF SPECIES - 5

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
061680

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	.0	.0	19.4	6.5	11.2	.2
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	504.9	368.9	77.7	317.2	218.2	9.6
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	.0	38.8	38.8	25.9	22.4	.8
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
PSEUDODIAMESA	291.3	135.9	77.7	168.3	110.4	5.1
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CRICOTOPUS VAN DER WULP	737.9	388.3	233.0	453.1	258.6	13.7
ORTHOCLADIUS VAN DER WULP	1359.2	1708.7	1786.4	1618.1	227.6	48.8
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	757.3	427.2	330.1	504.9	223.9	15.2
FAMILY EPHYDRIDAE	.0	19.4	.0	6.5	11.2	.2
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	.0	19.4	77.7	32.4	40.4	1.
SIMULIUM LARVAE	174.8	97.1	252.4	174.8	77.7	5.3
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	19.4	.0	.0	6.5	11.2	.2
TOTAL	3864.7	3203.9	2893.2	3313.9	485.2	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	19.4	6.5	11.2	.2
CLASS OLIGOCHAETA	504.9	368.9	77.7	317.2	218.2	9.6
ORDER EPHEMEROPTERA	.0	38.8	38.8	25.9	22.4	.8
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	3145.6	2660.2	2427.2	2744.3	366.5	82.8
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

- -

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.559
VARIANCE - .0003
MAXIMUM INDEX - 2.398
EVENNESS - .650
NO OF SPECIES - 11

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
061680

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	19.4	38.8	.0	19.4	19.4	.8
DERONECTES SHARP	38.8	.0	.0	12.9	22.4	.5
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	135.9	97.1	.0	77.7	70.0	3.3
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	1165.0	621.4	97.1	627.8	534.0	26.4
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	213.6	116.5	110.0	106.9	4.6
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	349.5	155.3	58.3	187.7	148.3	7.9
SIMULIUM LARVAE	2757.3	835.0	446.6	1346.3	1237.3	56.5
TOTAL	4466.0	1961.2	718.4	2381.9	1908.9	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	58.3	38.8	.0	32.4	29.7	1.4
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	1301.0	932.0	213.6	815.5	553.0	34.2
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.165
VARIANCE - .0004
MAXIMUM INDEX - 1.946
EVENNESS - .614
NO OF SPECIES - 7

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
061680

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	38.8	.0	.0	12.9	22.4	.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	19.4	.0	6.5	11.2	.2
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	213.6	19.4	.0	77.7	118.1	2.6
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CRICOTOPUS VAN DER WULP	446.6	116.5	.0	187.7	231.7	6.2
ORTHOCLADIUS VAN DER WULP	1553.4	776.7	271.8	867.3	645.6	28.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	330.1	.0	.0	110.0	190.6	3.6
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	155.3	388.3	330.1	291.3	121.3	9.6
SIMULIUM LARVAE	1087.4	1611.7	1689.3	1462.8	327.4	48.4
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	.0	19.4	.0	6.5	11.2	.2
TOTAL	3825.2	2951.5	2291.3	3022.7	769.5	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	38.8	.0	.0	12.9	22.4	.4
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	19.4	.0	6.5	11.2	.2
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	2543.7	912.6	771.8	1242.7	1171.3	41.1
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.372
VARIANCE - .0003
MAXIMUM INDEX - 2.197
EVENNESS - .624
NO OF SPECIES - 9

JULY

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072180

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	97.1	194.2	38.8	110.0	78.5	1.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	699.0	466.0	407.8	524.3	154.1	8.9
ORDER DIPTERA						
FAMILY CHIRONOMIDAE	.0	.0	19.4	6.5	11.2	.1
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	.0	.0	19.4	6.5	11.2	.1
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	291.3	.0	330.1	207.1	180.4	3.5
ORTHOCLADINAE B	252.4	.0	271.8	174.8	151.7	3.0
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	.0	58.3	.0	19.4	33.6	.3
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	.0	58.3	.0	19.4	33.6	.3
SIMULIUM LARVAE	2291.3	2368.9	9242.7	4634.3	3991.2	79.0
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	155.3	135.9	194.2	161.8	29.7	2.8
TOTAL	3786.4	3281.6	10524.3	5864.1	4043.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	97.1	194.2	38.8	110.0	78.5	1.9
ORDER EPHEMEROPTERA	699.0	466.0	407.8	524.3	154.1	8.9
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	543.7	58.3	640.8	414.2	312.1	7.1
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .851

VARIANCE - .0003
MAXIMUM INDEX - 2.303
EVENNESS - .370
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072180

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY NAIDIDAE						
NAIS SP.	.0	135.9	271.8	135.9	135.9	2.6
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	19.4	.0	6.5	11.2	.1
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	19.4	.0	.0	6.5	11.2	.1
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	58.3	19.4	77.7	51.8	29.7	1.
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	2330.1	2854.4	1514.6	2233.0	675.2	42.5
ORTHOCLADINAE B	2155.3	2388.3	1805.8	2116.5	293.2	40.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	19.4	155.3	97.1	90.6	68.2	1.7
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	38.8	155.3	64.7	80.8	1.2
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	213.6	660.2	776.7	550.2	297.2	10.5
TOTAL	4796.1	6271.8	6699.0	5255.7	881.4	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	135.9	271.8	135.9	135.9	2.6
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	19.4	.0	6.5	11.2	.1
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	4563.1	5417.5	3495.1	4491.9	963.1	85.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.247
VARIANCE - .0002
MAXIMUM INDEX - 2.197
EVENNESS - .567
NO OF SPECIES - 9

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072180

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	.0	368.9	38.8	135.9	202.7	4.8
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	19.4	.0	6.5	11.2	.2
ORDER DIPTERA						
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	873.8	854.4	1301.0	1009.7	252.4	35.7
SIMULIUM LARVAE	1514.6	2116.5	1242.7	1624.6	447.2	57.4
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	.0	116.5	19.4	45.3	62.4	1.6
FAMILY TABANIDAE						
CHRYSOPS MEIGEN	19.4	.0	.0	6.5	11.2	.2
TOTAL	2407.8	3475.7	2601.9	2828.5	568.9	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	368.9	38.8	135.9	202.7	4.8
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	19.4	.0	6.5	11.2	.2
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	.0	.0	.0	.0	.0	.0
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .926
VARIANCE - .0002
MAXIMUM INDEX - 1.792
EVENNESS - .517
NO OF SPECIES - 6

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072180

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER TRICHOPTERA						
FAMILY HYDROPTILIDAE						
HYDROPTILIDAE PUPA	19.4	.0	.0	6.5	11.2	.6
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	.0	.0	19.4	6.5	11.2	.6
SUBFAMILY ORTHOCLADIINAE	.0	19.4	.0	6.5	11.2	.6
ORTHOCLADINAE A	233.0	38.8	271.8	181.2	124.8	16.5
ORTHOCLADINAE B	.0	194.2	77.7	90.6	97.7	8.2
TRIBES ORTHOCLADIINI AND METRIOCNE						
CRICOTOPUS VAN DER WULP	.0	.0	194.2	64.7	112.1	5.9
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	.0	38.8	12.9	22.4	1.2
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	233.0	252.4	38.8	174.8	118.1	15.9
SIMULIUM LARVAE	1048.5	291.3	213.6	517.8	461.3	47.1
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	.0	58.3	19.4	25.9	29.7	2.4
FAMILY TABANIDAE						
CHRYSOPS MEIGEN	.0	19.4	19.4	12.9	11.2	1.2
TOTAL	1534.0	873.8	893.2	1100.3	375.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	19.4	.0	.0	6.5	11.2	.6
FAMILY CHIRONOMIDAE	231.0	252.4	601.9	362.5	207.6	32.9
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.600
VARIANCE - .0009
MAXIMUM INDEX - 2.398
EVENNESS - .667
NO OF SPECIES - 11

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072280

STATION NUMBER - 27
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY NAIDIDAE						
NAIS SP.	38.8	.0	.0	12.9	22.4	1.2
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	291.3	116.5	155.3	187.7	91.8	17.3
DACTYLOBAETIS	194.2	.0	291.3	161.8	148.3	14.9
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	116.5	174.8	213.6	168.3	48.9	15.5
RHITHROGENA EATON	97.1	.0	19.4	38.8	51.4	3.6
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INFERMIS EATON	.0	58.3	58.3	38.8	33.6	3.6
EPHEMERELLA WALSH	97.1	213.6	58.3	123.0	80.8	11.3
FAMILY LEPTOPHLEBIIDAE						
CHORORTERPES EATON	19.4	38.8	19.4	25.9	11.2	2.4
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	38.8	.0	12.9	22.4	1.2
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	19.4	.0	19.4	12.9	11.2	1.2
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	135.9	19.4	252.4	135.9	116.5	12.5
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	271.8	77.7	77.7	142.4	112.1	13.1
FAMILY SIMULIDAE						
SIMULIUM LARVAE	58.3	.0	.0	19.4	33.6	1.8
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	19.4	.0	.0	6.5	11.2	.6
TOTAL	1359.2	737.9	1165.0	1087.4	317.9	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	38.8	.0	.0	12.9	22.4	1.2
ORDER EPHEMEROPTERA	815.5	640.8	815.5	757.3	100.9	69.6
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	155.3	19.4	271.	148.9	126.3	13.7
FAMILY CHIRONOMIDAE	271.0	77.7	77.7	142.4	112.1	13.1
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.236
VARIANCE - .0005
MAXIMUM INDEX - 2.639
EVENNESS - .847
NO OF SPECIES - 14

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
072280

STATION NUMBER - 29
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
TUBIFEX TUBIFEX	.0	19.4	19.4	12.9	11.2	.8
LIMNODRILUS HOFFMEISTERI	77.7	349.5	.0	142.4	183.5	9.1
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	349.5	388.3	504.9	414.2	80.6	26.3
DACTYLOBAETIS	19.4	.0	.0	6.5	11.2	.4
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	893.2	466.0	601.9	653.7	218.2	41.6
FAMILY EPHEMERELLIDAE						
EPHEMERELLA WALSH	.0	.0	116.5	38.8	67.3	2.5
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON	.0	58.3	.0	19.4	33.6	1.2
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	.0	38.8	12.9	22.4	.8
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	.0	58.3	58.3	38.8	33.6	2.5
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	194.2	58.3	116.5	123.0	68.2	7.8
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	.0	116.5	38.8	51.8	59.3	3.3
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	155.3	.0	51.8	89.7	3.3
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	.0	.0	19.4	6.5	11.2	.4
TOTAL	1534.0	1669.4	1514.6	1572.8	84.4	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	77.7	368.9	19.4	155.3	187.3	9.9
ORDER EPHEMEROPTERA	1262.1	912.6	1262.1	1145.6	201.8	72.8
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	58.3	58.3	38.8	33.6	2.5
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	194.2	58.3	116.5	123.0	68.2	7.8
FAMILY CHIRONOMIDAE	.0	116.5	38.8	51.8	59.3	3.3
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.719
VARIANCE - .0007
MAXIMUM INDEX - 2.565
EVENNESS - .670
NO OF SPECIES - 13

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AUGUST

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
081880

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	77.7	58.3	.0	45.3	40.4	1.7
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	582.5	621.4	932.0	717.0	191.6	27.4
ORDER PLECOPTERA						
FAMILY CHLOROPERLIDAE	38.8	.0	.0	12.9	22.4	.5
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	.0	.0	58.3	19.4	33.6	.7
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CRICOTOPUS VAN DER WULP	38.8	77.7	310.7	142.4	147.0	5.5
EUKIEFFERIELLA THIENEMANN	155.3	213.6	640.9	336.6	265.1	13.0
ORTHOCLADIUS VAN DER WULP	271.8	368.0	349.5	330.1	51.4	12.7
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	135.9	.0	58.3	64.7	68.2	2.5
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	155.3	58.3	1087.4	433.7	568.2	16.7
SIMULIUM LARVAE	699.0	543.7	.0	414.2	367.1	16.0
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	97.1	58.3	58.3	71.2	22.4	2.7
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	19.4	.0	.0	6.5	11.2	.2
FAMILY STRATIOMYIDAE						
EUPARYPHUS	.0	.0	19.4	6.5	11.2	.2
TOTAL	2271.8	2000.0	3514.6	2595.5	807.5	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	77.7	58.3	.0	45.3	40.4	1.7
ORDER EPHEMEROPTERA	582.5	621.4	932.0	712.0	191.6	27.4
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	38.8	.0	.0	12.9	22.4	.5
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	601.9	660.2	1417.5	893.2	455.0	34.4
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.987
VARIANCE - .0002
MAXIMUM INDEX - 2.565
EVENNESS - .775
NO OF SPECIES - 13

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
ORIBRO

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM NEMATODA	19.4	.0	.0	6.5	11.2	.3
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	1708.7	.0	.0	569.6	986.5	27.8
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS TEACH	.0	38.8	77.7	38.8	38.8	1.3
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS	1320.6	912.6	427.6	886.7	447.2	43.2
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	77.7	155.3	38.9	90.6	59.3	3.0
FAMILY EMPIDIDAE						
CHELIFERA MACQUART	.0	.0	19.4	6.5	11.2	.3
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH PUPAE	.0	19.4	.0	6.5	11.2	.3
SIMULIUM LARVAE	.0	7.7	97.1	58.3	51.4	2.0
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	718.4	194.2	233.0	381.9	297.1	18.6
FAMILY TIPULIDAE						
TIPULA LINNAEUS	19.4	.0	.0	6.5	11.2	.3
TOTAL	3864.1	1394.1	893.2	2051.8	1585.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	19.4	.0	.0	6.5	11.2	.3
CLASS OLIGOCHAETA	1708.7	.0	.0	569.6	986.5	27.8
ORDER EPHEMEROPTERA	.0	38.8	77.7	38.8	38.8	1.9
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	1398.1	1068.0	466.0	977.3	472.6	47.6
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

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DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.418
VARIANCE - .0004
MAXIMUM INDEX - 2.303
EVENNESS - .616
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
OP1980

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	19.4	.0	194.2	71.2	106.9	10.1
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	116.5	.0	38.8	67.3	5.5
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	97.1	.0	330.1	142.4	169.6	20.2
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	19.4	.0	.0	6.5	11.2	.9
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	174.8	504.9	291.3	323.6	167.4	45.9
SIMULIUM LARVAE	38.8	291.3	.0	110.0	158.1	15.6
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	19.4	.0	.0	6.5	11.2	.9
FAMILY TABANIDAE						
CHRYSOPS MEIGEN	.0	.0	19.4	6.5	11.2	.9
TOTAL	368.9	912.6	835.0	705.5	294.1	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	19.4	.0	194.2	71.2	106.9	10.1
ORDER EPHEMEROPTERA	.0	116.5	.0	38.8	67.3	5.5
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	97.1	.0	330.1	142.4	169.6	20.2
FAMILY CHIRONOMIDAE	.0	.0	.0	.0	.0	.0
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.490
VARIANCE - .0010
MAXIMUM INDEX - 2.079
EVENNESS - .717
NO OF SPECIES - 8

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
081880

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	.0	38.8	.0	12.9	22.4	1.3
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
DACTYLOBAETIS	.0	.0	58.3	19.4	33.6	2.0
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	19.4	19.4	.0	12.9	11.2	1.3
ORDER ODONATA						
SUBORDER ZYGOPTERA						
FAMILY COENAGRIONIDAE						
ARGIA RAMBUR	38.8	19.4	.0	19.4	19.4	2.0
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	.0	19.4	6.5	11.2	.7
DERONECTES SHARP	.0	.0	19.4	6.5	11.2	.7
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	38.8	97.1	.0	45.3	48.9	4.6
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	97.1	38.8	19.4	51.8	40.4	5.2
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	19.4	97.1	.0	38.8	51.4	3.9
SUBFAMILY ORTHOCLADIINAE						
ORTHOCLADINAE A	116.5	135.9	.0	84.1	73.5	8.5
ORTHOCLADINAE B	.0	116.5	.0	38.8	67.3	3.9
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	38.8	.0	.0	12.9	22.4	1.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	58.3	.0	19.4	25.9	29.7	2.6
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	135.9	155.3	135.9	142.4	11.2	14.4
SIMULIUM LARVAE	194.2	835.0	368.9	466.0	331.2	47.1
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	.0	19.4	.0	6.5	11.2	.7
TOTAL	757.3	1572.8	660.8	990.3	507.8	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	38.8	.0	12.9	22.4	1.3
ORDER EPHEMEROPTERA	19.4	19.4	58.3	32.4	22.4	2.3
ORDER ODONATA	38.8	19.4	.0	19.4	19.4	2.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	38.8	12.9	22.4	1.3
ORDER TRICHOPTERA	38.8	97.1	.0	45.3	48.9	4.6
FAMILY CHIRONOMIDAE	233.0	349.5	19.4	200.6	167.4	20.3
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.911
VARIANCE - .0016
MAXIMUM INDEX - 2.773
EVENNESS - .689
NO OF SPECIES - 16

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
OR1880

STATION NUMBER - 27
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
TUBIFEX TUBIFEX	.0	38.8	.0	12.9	22.4	.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	446.6	271.8	601.9	440.1	165.1	15.7
DACTYLOBAETIS	349.5	135.9	.0	161.8	176.2	5.8
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY	.0	.0	38.8	12.9	22.4	.5
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON	116.5	77.7	213.6	135.9	70.0	4.8
TRAVERELLA ALBERTANA MCDUNNOUGH	.0	155.3	233.0	129.4	118.6	4.6
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	796.1	1223.3	718.4	912.6	271.8	32.5
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	.0	.0	19.4	6.5	11.2	.2
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	19.4	446.6	135.9	200.6	220.8	7.1
FAMILY HYDROPSYCHIDAE	349.5	932.0	524.3	601.9	298.9	21.4
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAGYRACTIS LANGE	.0	.0	58.3	19.4	33.6	.7
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBE ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	77.7	135.9	.0	71.2	68.2	2.5
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS	.0	77.7	.0	25.9	44.8	.9
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	155.3	19.4	58.3	77.7	70.0	2.8
TOTAL	2310.7	3514.6	2601.9	2809.1	628.1	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	38.8	.0	12.9	22.4	.5
ORDER EPHEMEROPTERA	1708.7	1864.1	1805.8	1792.9	78.5	63.8
ORDER ODONATA	.0	.0	19.4	6.5	11.2	.2
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	368.9	1378.6	660.2	802.6	519.7	28.6
FAMILY CHIRONOMIDAE	77.7	213.6	.0	97.1	108.1	3.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.961
VARIANCE - .0003
MAXIMUM INDEX - 2.639
EVENNESS - .743
NO OF SPECIES - 14

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
081880

STATION NUMBER - 29
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	1475.7	835.0	1262.1	1190.9	326.3	35.6
DACTYLOBAETIS	58.3	174.8	174.8	135.9	67.3	4.1
FAMILY POLYMITARCIDAE						
EPHORON ALBUM SAY	.0	19.4	.0	6.5	11.2	.2
FAMILY HEPTAGENIIDAE						
RHITHROGENA EATON	388.3	466.0	271.8	375.4	97.7	11.2
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	.0	77.7	38.8	38.8	38.8	1.2
FAMILY LEPTOPHLEBIIDAE						
CHOROTERPES EATON	310.7	213.6	349.5	291.3	70.0	8.7
TRAVERELLA ALBERTANA MCDUNNOUGH	38.8	135.9	19.4	64.7	62.4	1.9
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	524.3	213.6	737.9	491.9	263.6	14.7
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	19.4	.0	19.4	12.9	11.2	.4
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	155.3	349.5	.0	168.3	175.1	5.0
CLAASSENIA SABULOSA BANKS	58.3	.0	38.8	32.4	29.7	1.
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	388.3	.0	.0	129.4	224.2	3.9
FAMILY HYDROPTILIDAE						
AGRAYLEA CURTIS	.0	19.4	.0	6.5	11.2	.2
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAGYRACTIS LANGE	19.4	19.4	.0	12.9	11.2	.4
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
CRICOTOPUS VAN DER WULP	38.8	.0	.0	12.9	22.4	.4
ORTHOCLADIUS VAN DER WULP	155.3	233.0	427.2	271.8	140.0	8.1
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	.0	58.3	19.4	25.9	29.7	.8
SIMULIUM LARVAE	.0	155.3	.0	51.8	89.7	1.5
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	77.7	.0	.0	25.9	44.8	.8
TOTAL	3708.7	2970.9	3359.2	3346.3	369.1	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	2796.1	2135.9	2854.4	2595.5	399.0	77.6
ORDER ODONATA	19.4	.0	19.4	12.9	11.2	.4
ORDER PLECOPTERA	213.6	349.5	38.8	200.6	155.7	6.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	388.3	19.4	.0	135.9	218.8	4.1
FAMILY CHIRONOMIDAE	194.2	233.0	427.2	284.8	124.8	8.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

- -

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.119
VARIANCE - .0003
MAXIMUM INDEX - 2.944
EVENNESS - .720
NO OF SPECIES - 19

OCTOBER

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101480

STATION NUMBER - 13
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY HAPLOTAXIDAE						
HAPLOTAXIS	77.7	58.3	155.3	97.1	51.4	18.5
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	.0	77.7	.0	25.9	44.8	4.9
FAMILY NAIDIDAE						
NAIS SP.	58.3	.0	19.4	25.9	29.7	4.9
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	77.7	155.3	155.3	129.4	44.8	24.7
ORDER PLECOPTERA						
FAMILY CHLOROPERLIDAE	.0	38.8	.0	12.9	22.4	2.5
ORDER COLEOPTERA						
FAMILY ELMIDAE						
OPTIOSERVUS	19.4	.0	.0	6.5	11.2	1.2
ORDER DIPTERA						
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	19.4	58.3	58.3	45.3	22.4	8.6
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	.0	58.3	19.4	33.6	3.7
FAMILY SIMULIDAE						
SIMULIUM LARVAE	.0	19.4	.0	6.5	11.2	1.2
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	38.8	213.6	213.6	155.3	100.9	29.6
TOTAL	291.3	621.4	660.2	524.3	202.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	135.9	135.9	174.8	148.9	22.4	28.4
ORDER EPHEMEROPTERA	77.7	155.3	155.3	129.4	44.8	24.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	38.8	.0	12.9	22.4	2.5
ORDER COLEOPTERA	19.4	.0	.0	6.5	11.2	1.2
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	19.4	58.3	116.5	64.7	48.9	12.3
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

- -

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.849
VARIANCE - .0013
MAXIMUM INDEX - 2.303
EVENNESS - .803
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101480

STATION NUMBER - 14
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE APUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
TUBIFEX TUBIFEX	233.0	77.7	.0	103.6	118.6	9.5
LIMNODRILUS HOFFMEISTERI	388.3	.0	.0	129.4	224.2	11.9
FAMILY NAIDIDAE						
NAIS SP.	77.7	.0	.0	25.9	44.8	2.4
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	38.8	19.4	.0	19.4	19.4	1.8
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	19.4	.0	.0	6.5	11.2	.6
FAMILY CHIRONOMIDAE						
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	77.7	.0	213.6	97.1	108.1	8.9
SUBFAMILY CHIRONOMINAE						
TRIBE CHIRONOMINI						
TRIBELOS	368.9	116.5	932.0	472.5	417.5	43.5
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	.0	19.4	6.5	11.2	.6
CHIRONOMIDAE PUPAE	38.8	.0	.0	12.9	22.4	1.2
FAMILY MUSCIDAE						
LIMNOPHORA ROBINEAU-DESVOIDY	174.8	97.1	368.9	213.6	140.0	19.6
TOTAL	1417.5	310.7	1534.0	1087.4	675.2	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	699.0	77.7	.0	258.9	383.1	23.8
ORDER EPHEMEROPTERA	38.8	19.4	.0	19.4	19.4	1.8
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	.0	.0	.0	.0	.0
FAMILY CHIRONOMIDAE	485.4	116.5	1165.0	589.0	531.9	54.2
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.649
VARIANCE - .0008
MAXIMUM INDEX - 2.303
EVENNESS - .716
NO OF SPECIES - 10

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101490

STATION NUMBER - 20
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	.0	271.8	213.6	161.8	143.1	16.8
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	38.8	.0	12.9	22.4	1.3
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	19.4	.0	.0	6.5	11.2	.7
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
ORTHOCLADIUS VAN DER WULP	38.8	.0	.0	12.9	22.4	1.3
FAMILY SIMULIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	.0	58.3	77.7	45.3	40.4	4.7
SIMULIUM LARVAE	97.1	1145.6	932.0	724.9	554.1	75.2
TOTAL	155.3	1514.6	1223.3	964.4	715.6	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	.0	.0	.0	.0	.0
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	.0	271.8	213.6	161.8	143.1	16.8
FAMILY CHIRONOMIDAE	58.3	.0	.0	19.4	33.6	2.0
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - .807
VARIANCE - .0011
MAXIMUM INDEX - 1.792
EVENNESS - .450

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101480

STATION NUMBER - 21
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ARTHROPODA						
CLASS CRUSTACEA						
ORDER AMPHIPODA						
FAMILY TALITRIDAE						
HYALELLA AZTECA SAUSSURE	.0	.0	38.8	12.9	22.4	1.1
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	.0	58.3	.0	19.4	33.6	1.7
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	.0	19.4	.0	6.5	11.2	.6
SUBORDER ZYGOPTERA						
FAMILY COENAGRIONIDAE						
AMPHIAGRION SELYS	97.1	19.4	38.8	51.8	40.4	4.6
ARGIA RAMBUR	77.7	38.8	.0	38.8	38.8	3.4
COENAGRION	135.9	.0	.0	45.3	78.5	4.0
ORDER COLEOPTERA						
FAMILY DYTISCIDAE						
AGABUS LEACH	.0	213.6	.0	71.2	123.3	6.3
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	271.8	213.6	330.1	271.8	58.3	24.1
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	135.9	446.6	252.4	278.3	156.9	24.7
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	.0	77.7	.0	25.9	44.8	2.3
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	.0	38.8	.0	12.9	22.4	1.1
ORTHOCLADIUS VAN DER WULP	.0	349.5	.0	116.5	201.8	10.3
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
CHIRONOMIDAE PUPAE	.0	155.3	.0	51.8	89.7	4.6
FAMILY SIMULIIDAE						
SIMULIUM ARCTICUM MALLOCH (PUPAE	349.5	.0	.0	116.5	201.8	10.3
FAMILY TIPULIDAE						
TIPULA LINNAEUS	.0	19.4	.0	6.5	11.2	.6
TOTAL	1068.0	1650.5	660.2	1126.2	497.7	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	.0	.0	.0	.0	.0	.0
ORDER EPHEMEROPTERA	.0	58.3	.0	19.4	33.6	1.7
ORDER ODONATA	310.7	77.7	38.8	142.4	147.0	12.6
ORDER PLECOPTERA	.0	.0	.0	.0	.0	.0
ORDER COLEOPTERA	.0	213.6	.0	71.2	123.3	6.3
ORDER TRICHOPTERA	271.8	213.6	330.1	271.8	58.3	24.1
FAMILY CHIRONOMIDAE	.0	621.4	.0	207.1	358.7	18.4
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 2.180
VARIANCE - .0007
MAXIMUM INDEX - 2.708
EVENNESS - .805
NO OF SPECIES - 15

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101580

STATION NUMBER - 27
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	77.7	446.6	233.0	252.4	185.2	6.0
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	19.4	.0	291.3	103.6	162.8	2.5
DACTYLOBAETIS	.0	.0	19.4	6.5	11.2	.2
FAMILY HEPTAGENIIDAE						
HEPTAGENIA WALSH	38.8	38.8	38.8	38.8	.0	.9
FAMILY EPHEMERELLIDAE						
EPHEMERELLA INERMIS EATON	.0	.0	38.8	12.9	22.4	.3
ORDER ODONATA						
SUBORDER ANISOPTERA						
FAMILY GOMPHIDAE						
OPHIOGOMPHUS SELYS	38.8	.0	.0	12.9	22.4	.3
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	.0	.0	19.4	6.5	11.2	.2
ORDER TRICHOPTERA						
FAMILY BRACHYCENTRIDAE						
BRACHYCENTRUS CURTIS	.0	19.4	19.4	12.9	11.2	.3
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	524.3	.0	252.4	258.9	262.2	6.2
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAGYRACTIS LANGE	.0	.0	19.4	6.5	11.2	.2

ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	.0	19.4	6.5	11.2	.2
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	621.4	349.5	835.0	601.9	243.3	14.4
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	77.7	213.6	58.3	116.5	84.6	2.8
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	388.3	174.8	582.5	391.9	204.0	9.1
ORTHOCLADIUS VAN DER WULP	2330.1	1553.4	2951.5	2278.3	700.5	54.5
SUBFAMILY CHIRONOMINAE						
TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	38.8	38.8	135.9	71.2	56.1	1.7
FAMILY TIPULIDAE						
HEXATOMA LATREILLE	.0	.0	38.8	12.9	22.4	.3
TOTAL	4155.3	2835.0	5553.4	4181.2	1359.4	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	77.7	446.6	233.0	252.4	185.2	6.0
ORDER EPHEMEROPTERA	58.3	38.8	388.3	161.8	196.4	3.9
ORDER ODONATA	38.8	.0	.0	12.9	22.4	.3
ORDER PLECOPTERA	.0	.0	19.4	6.5	11.2	.2
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	524.3	19.4	271.8	271.8	252.4	6.5
FAMILY CHIRONOMIDAE	3456.3	2330.1	4563.1	3449.8	1116.5	82.5
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.586
VARIANCE - .0004
MAXIMUM INDEX - 2.833
EVENNESS - .560
NO OF SPECIES - 17

BENTHOS (MACROINVERTEBRATES) DENSITY AND SPECIES DIVERSITY CALCULATIONS

RIO BLANCO OIL SHALE COMPANY
TRACT C-A
101580

STATION NUMBER - 29
NUMBER OF REPLICATES - 3

TAXON	DENSITY(#/M2) REP 1	REP 2	REP 3	MEAN	S.D.	PERCENT RELATIVE ABUNDANCE
PHYLUM ANNELIDA						
CLASS OLIGOCHAETA						
ORDER HAPLOTAXIDA						
FAMILY TUBIFICIDAE						
LIMNODRILUS HOFFMEISTERI	155.3	446.6	.0	200.6	226.7	3.5
PHYLUM ARTHROPODA						
CLASS INSECTA						
ORDER EPHEMEROPTERA						
FAMILY BAETIDAE						
BAETIS LEACH	.0	524.3	271.8	265.4	262.2	4.6
FAMILY TRICORYTHIDAE						
TRICORYTHODES ULMER	.0	.0	19.4	6.5	11.2	.1
ORDER PLECOPTERA						
FAMILY PERLODIDAE						
ISOPERLA BANKS	349.5	524.3	213.6	362.5	155.7	6.3
CLAASSENIA SABULOSA BANKS	.0	19.4	.0	6.5	11.2	.1
ORDER TRICHOPTERA						
FAMILY HYDROPSYCHIDAE						
HYDROPSYCHE PICTET	8388.3	718.4	1009.7	3372.2	4346.6	58.5
ORDER LEPIDOPTERA						
FAMILY PYRALIDAE						
PARAPYRACTIS LANGE	155.3	77.7	97.1	110.0	40.4	1.9
ORDER DIPTERA						
FAMILY CERATOPOGONIDAE						
PALPOMYIA GP. SPP. MEIGEN	.0	38.8	.0	12.9	22.4	.2
FAMILY CHIRONOMIDAE						
SUBFAMILY TANYPODINAE						
TRIBE MACROPELOPIINI						
PROCLADIUS SKUSE	213.6	427.2	271.8	304.2	110.4	5.3
SUBFAMILY DIAMESINAE						
TRIBE DIAMESINI						
DIAMESA MEIGEN	.0	19.4	.0	6.5	11.2	.1
PSEUDODIAMESA	19.4	.0	.0	6.5	11.2	.1
SUBFAMILY ORTHOCLADIINAE						
TRIBES ORTHOCLADIINI AND METRIOCNE						
EUKIEFFERIELLA THIENEMANN	58.3	.0	77.7	45.3	40.4	.8
ORTHOCLADIUS VAN DER WULP	776.7	543.7	1398.1	906.1	441.6	15.7
SUBFAMILY CHIRONOMINAE						

TRIBE TANYTARSINI						
MICROPSECTRA KIEFFER	.0	38.8	19.4	19.4	19.4	.3
FAMILY TIPULIDAE						
HEXATOMA LATRETILLE	155.3	213.6	58.3	142.4	78.5	2.5
TOTAL	10271.8	3592.2	3436.9	5767.0	3902.1	100.0

SUMMARY - MAJOR BENTHOS TAXA

PHYLUM NEMATODA	.0	.0	.0	.0	.0	.0
CLASS OLIGOCHAETA	155.3	446.6	.0	200.6	226.7	3.5
ORDER EPHEMEROPTERA	.0	524.3	291.3	271.8	262.7	4.7
ORDER ODONATA	.0	.0	.0	.0	.0	.0
ORDER PLECOPTERA	349.5	543.7	213.6	368.9	165.9	6.4
ORDER COLEOPTERA	.0	.0	.0	.0	.0	.0
ORDER TRICHOPTERA	8388.3	718.4	1009.7	3372.2	4346.6	58.5
FAMILY CHIRONOMIDAE	1068.0	1029.1	1767.0	1288.0	415.2	22.3
PHYLUM MOLLUSCA	.0	.0	.0	.0	.0	.0

DIVERSITY INDEX CALCULATIONS

SHANNON INDEX - 1.461
VARIANCE - .0003
MAXIMUM INDEX - 2.708
EVENNESS - .539
NO OF SPECIES - 15

APPENDIX 4-3

Analyses of Aquatic Data

APPENDIX 4-3.1

Results of the Statistical Analysis of the
1979 and 1980 RBOSC Periphyton Densities

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR PERIPHYTON DENSITY ESTIMATES

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN DATA SET = 2226

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR PERIPHYTON DENSITY ESTIMATES

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	32729604.51164776	935131.55747565	4.58	0.0001	0.068227	554.0381
ERROR	2190	446983902.02951484	204102.23836964		STD DEV		DENSITY MEAN
CORRECTED TOTAL	2225	479713506.54116260			451.77675723		81.54254268

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	4389.74907055	0.02	0.8834
SEASON	2	2759328.31862256	6.76	0.0012
STATION	5	3143611.33041901	3.08	0.0091
YEAR*SEASON	2	1335657.46020757	3.27	0.0381
YEAR*STATION	5	7637936.71265894	7.48	0.0001
SEASON*STATION	10	6239243.10675934	3.06	0.0007
YEAR*SEASON*STATION	10	11609437.83390975	5.69	0.0001

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR PERIPHYTON DENSITY ESTIMATES

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=2190 MS=204102

GROUPING	MEAN	N	YEAR
A	82.784548	1249	80
A			
A	79.954759	977	79

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR PERIPHYTON DENSITY ESTIMATES

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=2190 MS=204102

GROUPING	MEAN	N	SEASON
A	153.685207	338	FALL
B	84.479076	1104	SUMMER
B			
B	46.305102	784	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR PERIPHYTON DENSITY ESTIMATES

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=2190 MS=204102

GROUPING		MEAN	N	STATION
	A	141.876812	414	14
	A			
B	A	122.420833	288	13
B	A			
B	A	76.346739	368	29
B				
B		57.646324	408	27
B				
B		50.347520	383	20
B				
B		45.537260	365	21

APPENDIX 4-3.2

Results of the Statistical Analysis of the 1979 and 1980 RBOSC Benthos Densities

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER CHIRONOMIDAE

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER CHIRONOMIDAE

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	222471575.47444496	6356330.72784128	4.01	0.0001	0.473815	134.4253
ERROR	156	247061057.80222042	1583724.72950141		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	469532633.27666530			1258.46125467		936.17916667

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	241840.21687502	0.15	0.6965
SEASON	2	2353861.57521518	0.74	0.4773
STATION	5	109032139.59268790	13.77	0.0001
YEAR*SEASON	2	9060985.38889594	2.86	0.0602
YEAR*STATION	5	8610840.94975656	1.09	0.3697
SEASON*STATION	10	69239394.35765305	4.37	0.0001
YEAR*SEASON*STATION	10	23932513.39336132	1.51	0.1400

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER CHIRONOMIDAE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=1583725

GROUPING	MEAN	N	YEAR
A	971.669792	96	79
A			
A	900.688542	96	80

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER CHIRONOMIDAE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=1583725

GROUPING	MEAN	N	SEASON
A	1019.861458	96	SUMMER
A			
A	984.872222	36	FALL
A			
A	773.071667	60	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER CHIRONOMIDAE

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=1583725

GROUPING	MEAN	N	STATION
A	2428.397222	36	14
B	867.902778	36	20
B			
B	749.919444	36	21
B			
B	694.262500	24	27
B			
B	359.012500	24	29
B			
B	244.552778	36	13

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER COLEOPTERA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER COLEOPTERA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	21275.22133681	607.86346677	1.42	0.0786	0.241074	299.0549
ERROR	156	66976.59111111	429.33712251		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	88251.81244792			20.72045179		6.92864583

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	83.87296875	0.20	0.6591
SEASON	2	331.10849653	0.39	0.6807
STATION	5	6367.77370404	2.97	0.0138
YEAR*SEASON	2	2157.96980208	2.51	0.0843
YEAR*STATION	5	568.32421653	0.26	0.9307
SEASON*STATION	10	5314.68191401	1.24	0.2710
YEAR*SEASON*STATION	10	6451.49023486	1.50	0.1430

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER COLEOPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=429.337

GROUPING	MEAN	N	YEAR
A	7.589583	96	79
A			
A	6.267708	96	80

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER COLEOPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=429.337

GROUPING	MEAN	N	SEASON
A	7.930208	96	SUMMER
A			
A	7.477778	36	FALL
A			
A	4.996667	60	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER COLEOPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=429.337

GROUPING	MEAN	N	STATION
A	16.161111	36	21
A			
B A	11.377778	36	20
B			
B	5.630556	36	14
B			
B	2.437500	24	27
B			
B	1.616667	36	13
B			
B	0.812500	24	29

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER EPHENEROPTERA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER EPHENEROPTERA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	131319237.60855884	3751978.21738740	11.32	0.0001	0.717526	147.1186
ERROR	156	51697430.07722231	331393.78254630		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	183016667.68578116			575.66811840		391.27531250

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	1552627.06505209	4.69	0.0319
SEASON	2	6656504.39716317	10.04	0.0001
STATION	5	69555376.27344231	41.98	0.0001
YEAR*SEASON	2	2178577.51966319	3.29	0.0400
YEAR*STATION	5	8970563.59971590	5.41	0.0002
SEASON*STATION	10	23435293.06489775	7.07	0.0001
YEAR*SEASON*STATION	10	18970295.68862442	5.72	0.0001

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER EPHENEROPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=331394

GROUPING	MEAN	N	YEAR
A	481.220833	96	79
B	301.369792	96	80

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER EPHENEROPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=331394

GROUPING	MEAN	N	SEASON
A	552.580208	96	SUMMER
A			
A	399.877778	36	FALL
B	128.090000	60	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER EPHENEROPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=331394

GROUPING	MEAN	N	STATION
A	1515.570833	24	29
A			
A	1364.687500	24	27
B	128.575000	36	13
B			
B	28.100000	36	14
B			
B	5.744444	36	20
B			
B	4.316667	36	21

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=PHYLUM NEMATODA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 127

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=PHYLUM NEMATODA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR) F	R-SQUARE	C.V.
MODEL	35	111720.84378609	3192.02410817	2.45	0.0004	0.485209	496.3232
ERROR	91	118532.35416667	1302.55334249		STD DEV		DENSITY MEAN
CORRECTED TOTAL	126	230253.19795276			36.09090387		7.27165354

SOURCE	DF	TYPE I SS	F VALUE	PR) F
YEAR	1	5538.11898202	4.25	0.0421
SEASON	2	4027.06259250	1.55	0.2187
STATION	5	27530.83210201	4.23	0.0018
YEAR*SEASON	2	4848.20787380	1.86	0.1614
YEAR*STATION	5	21461.71696012	3.30	0.0089
SEASON*STATION	10	23562.54443096	1.81	0.0699
YEAR*SEASON*STATION	10	24752.36084467	1.90	0.0550

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=PHYLUM NEMATODA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=91 MS=1302.55

GROUPING	MEAN	N	YEAR
A	13.823437	64	79
B	0.615873	63	80

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=PHYLUM NEMATODA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=91 MS=1302.55

GROUPING	MEAN	N	SEASON
A	18.050000	24	FALL
A			
A	6.509375	64	SUMMER
A			
A	1.889744	39	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=PHYLUM NEMATODA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=91 MS=1302.55

GROUPING	MEAN	N	STATION
A	38.578261	23	14
B	1.508333	24	13
B			
B	0.000000	24	20
B			
B	0.000000	24	21
B			
B	0.000000	16	27
B			
B	0.000000	16	29

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER ODONTA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER ODONTA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	60500.94119792	1728.59831994	5.58	0.0001	0.555904	497.2121
ERROR	156	48332.58000000	309.82423077		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	108833.52119792			17.60182464		3.54010417

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	1649.12130208	5.32	0.0224
SEASON	2	3934.10422569	6.35	0.0022
STATION	5	4944.20064498	3.19	0.0091
YEAR*SEASON	2	4451.60172569	7.18	0.0010
YEAR*STATION	5	5322.96002700	3.44	0.0058
SEASON*STATION	10	20295.16132725	6.55	0.0001
YEAR*SEASON*STATION	10	19903.79194522	6.42	0.0001

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER ODONTA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=309.824

GROUPING	MEAN	N	YEAR
A	6.470833	96	80
B	0.609375	96	79

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER ODONTA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=309.824

GROUPING	MEAN	N	SEASON
A	12.944444	36	FALL
B	1.618750	96	SUMMER
B			
B	0.971667	60	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER ODONTA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=309.824

GROUPING	MEAN	N	STATION
A	13.483333	36	21
A			
B A	4.862500	24	27
B			
B	3.233333	24	29
B			
B	0.000000	36	13
B			
B	0.000000	36	14
B			
B	0.000000	36	20

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=CLASS OLIGOCHAETA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=CLASS OLIGOCHAETA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	736053820.91972110	21030109.16913489	7.32	0.0001	0.621406	230.8137
ERROR	156	448443636.89944320	2874638.69807335		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	1184497457.81916430			1695.47595031		734.56458333

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	74018234.08333358	25.75	0.0001
SEASON	2	6727924.16277078	1.17	0.3130
STATION	5	326105667.00750344	22.69	0.0001
YEAR*SEASON	2	6439509.29354864	1.12	0.3289
YEAR*STATION	5	271943790.93657243	18.92	0.0001
SEASON*STATION	10	24245975.52694751	0.84	0.5876
YEAR*SEASON*STATION	10	26572719.90904481	0.92	0.5125

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=CLASS OLIGOCHAETA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2874639

GROUPING	MEAN	N	YEAR
A	1355.460417	96	79
B	113.668750	96	80

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=CLASS OLIGOCHAETA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2874639

GROUPING	MEAN	N	SEASON
A	1006.491667	36	FALL
A			
A	789.407292	96	SUMMER
A			
A	483.660000	60	SPRING

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=CLASS OLIGOCHAETA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2874639

GROUPING	MEAN	N	STATION
A	3432.800000	36	14
B	242.616667	24	27
B			
B	163.122222	36	13
B			
B	128.958333	24	29
B			
B	43.044444	36	21
B			
B	30.994444	36	20

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER PLECOPTERA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER PLECOPTERA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	2172390.91564236	62068.31187550	22.82	0.0001	0.836624	188.8946
ERROR	156	424223.48555556	2719.38131766		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	2596614.40119792			52.14768756		27.60677083

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	5089.23046875	1.87	0.1733
SEASON	2	262611.19311458	48.29	0.0001
STATION	5	272330.15385346	20.03	0.0001
YEAR*SEASON	2	96184.51880903	17.69	0.0001
YEAR*STATION	5	240399.69984441	17.68	0.0001
SEASON*STATION	10	641050.20811876	23.57	0.0001
YEAR*SEASON*STATION	10	654725.91143336	24.08	0.0001

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THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER PLECOPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2719.38

GROUPING	MEAN	N	YEAR
A	32.755208	96	79
A			
A	22.458333	96	80

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GENERAL LINEAR MODELS PROCEDURE

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MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2719.38

GROUPING	MEAN	N	SEASON
A	104.583333	36	FALL
B	10.695000	60	SPRING
B	9.310417	96	SUMMER

RIO BLANCO OIL SHALE COMPANY
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THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
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TAXON=ORDER PLECOPTERA

GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=2719.38

GROUPING	MEAN	N	STATION
A	106.112500	24	29
B	67.838889	36	13
C	12.983333	24	27
C			
C	0.000000	36	14
C			
C	0.000000	36	20
C			
C	0.000000	36	21

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER TRICHOPTERA

GENERAL LINEAR MODELS PROCEDURE

CLASS LEVEL INFORMATION

CLASS	LEVELS	VALUES
YEAR	2	79 80
SEASON	3	FALL SPRING SUMMER
STATION	6	13 14 20 21 27 29

NUMBER OF OBSERVATIONS IN BY GROUP = 192

RIO BLANCO OIL SHALE COMPANY
AQUATIC ECOLOGY MONITORING PROGRAM - TRACT C-A

THREE-WAY MODEL 1 ANALYSIS OF VARIANCE
FOR BENTHOS DENSITY ESTIMATES

TAXON=ORDER TRICHOPTERA

GENERAL LINEAR MODELS PROCEDURE

DEPENDENT VARIABLE: DENSITY

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C.V.
MODEL	35	38538318.30722211	1101094.80877777	4.17	0.0001	0.483265	375.8927
ERROR	156	41207360.04944450	264149.74390670		STD DEV		DENSITY MEAN
CORRECTED TOTAL	191	79745678.35666660			513.95500183		136.72916667

SOURCE	DF	TYPE I SS	F VALUE	PR > F
YEAR	1	655996.04083333	2.48	0.1171
SEASON	2	3902194.48954861	7.39	0.0009
STATION	5	9109673.21714925	6.90	0.0001
YEAR*SEASON	2	1664784.08221528	3.15	0.0455
YEAR*STATION	5	2896682.19629596	2.19	0.0571
SEASON*STATION	10	15610133.41691319	5.91	0.0001
YEAR*SEASON*STATION	10	4698854.86426649	1.78	0.0686

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DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=264150

GROUPING	MEAN	N	YEAR
A	195.181250	96	80
A			
A	78.277083	96	79

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GENERAL LINEAR MODELS PROCEDURE

DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=264150

GROUPING	MEAN	N	SEASON
A	430.227778	36	FALL
B	87.503125	96	SUMMER
B			
B	39.391667	60	SPRING

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DUNCAN'S MULTIPLE RANGE TEST FOR VARIABLE DENSITY

MEANS WITH THE SAME LETTER ARE NOT SIGNIFICANTLY DIFFERENT.

ALPHA LEVEL=.05 DF=156 MS=264150

GROUPING	MEAN	N	STATION
A	683.820833	24	29
B	318.570833	24	27
C	29.513889	36	21
C			
C	27.394444	36	20
C			
C	4.052778	36	14
C			
C	0.000000	36	13

Form 1279–3
(June 1984)

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